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THE SURGEON AND HIS PATIENT*

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Emerson has said, "Character is higher than intellect." That this is true no one will doubt. We might also claim that intellect without character prostitutes opportunity. A surgeon without character is not worthy of the name.

When the patient selects the surgeon, he does it in the pursuit of happiness; without health, there can be no real happiness. Disease distracts one's attention from those things which he could do to contribute his share to the welfare of the community. In this light our responsibility looms large.

No group should be more conscious of the eternal truths contained in the saying "Do justly, love mercy, and walk humbly." Is there a surgeon who does not realize his own limitations? If so, he is not humble. Is there a surgeon who does not appreciate that he is dealing with that which can not be re-created by the hand of man; that the all to a family is in his hands materially, that through neglect or ignorance, an irreparable damage may result. If there is one who does not feel that way, of course, he will not feel the need of doing justly. Fair play is due the patient. If he can not handle a situation, he should admit the need for help; in the end the consciousness of having done the right thing will bring its own reward.

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To relieve suffering, or prevent it, is certainly the most merciful act given to man to do.

The appreciation of our moral responsibility is the first step in the line of duty to the prospective patient.

There are three questions which arise when one is consulted by a patient: what to do—when to do—how to do?

What to do—implies study, or familiarity with literature.

When to do—implies surgical judgment and

How to do—implies surgical technique.

WHAT TO DO?

Preparation for a surgical career may be compared to the saying of an ancient seer "Prepare for death, the day before you die." Who knows when that day will come. It is implied that preparation must constantly be made. Certainly, the surgeon who wants to be able to accept responsibilities, must constantly be preparing for new ones.

Study of current literature and study of the individual cases, are the chief methods of preparing ourselves for the prospective responsibilities.

No better example of the value of familiarity with literature can be given than what was said by the late Dr. S. M. D. Clark. He was associated in an important case with our beloved chief, Dr. Matas. Noting the resourcefulness of Dr. Matas, he said, "When most men have exhausted

their methods of handling a complicated situation, Dr. Matas just seems to be getting into his stride." The world marvels at Dr. Matas; men pay tribute to him everywhere. His desire for information and his ability to retain such knowledge is marvelous. Such a man inspires one, yes, drives one to study, so that he too may be able to cope with problems as they arise.

Why is one surgeon better than another. The better surgeon refuses to be a mere technician, ordered to carry out a definite procedure by a colleague, preferring conscientiously to study his cases in the light of modern methods of investigations, after which, he applies his technical skill for the benefit of his patient, at a time when experience and judgment dictate. The difference in end results lies not altogether in the greater ability of one surgeon over another, but rather in the fact that one is willing to consider each case an individual problem and another assumes a great deal, or he makes the so-called snapshot diagnosis. This latter is certainly dangerous for the surgeon and the patient, and is certainly a dangerous example to set for the young associate, who overlooks the value of surgical experience of the older colleague, and assumes that he too can make a hasty diagnosis. The viciousness of such a procedure is too degrading not to be avoided.

Why is it that some surgeons see so many rare and interesting cases, while others content themselves with routine surgery of the appendix and other easily removal organs. One investigates his individual cases, he is unwilling to attribute all symptoms as evidence of disease of a few organs, which he can easily remove, while the unrelieved patient finally casts about for someone to make a diagnosis. Unlike the early American "Millions for defense, but not one cent for tribute," we find many paying heavily for operation, but little for diagnosis, until after the original error has been discovered.

This brings us to the consideration of the second important problem which presents itself to the surgeon,—When to do, or surgical judgment.

Judgment is the result of observation, but this must be done with an inquisitive eye, otherwise, time and opportunity are wasted.

Experience enables one to form judgment more readily than his less experienced colleague. But if that experience has not been coupled with a progressive appreciation of the ever increasing number of laboratory tests, judgment then will be fallacious in an ever increasing proportion, because of the fallaciousness and undependability of intuition.

The College of Surgeons has done a noble work, in an effort to improve surgical judgment by demanding records, without which, experience must be transmitted from memory, and you will all agree that memory is inaccurate. Would one be willing today to accept statements from large Clinics, based only on memory.

On the other hand, how many valuable contributions which have caused changes in procedure, can be attributed to careful study of end results. Who can estimate the value of the Mayo Clinic records? Can one measure the good accomplished by the poetic genius of the great American Surgeon whose dreams have been translated into life-saving stations for human driftwood. A driftwood which would continue to be lost, but for the startling, yes, marvelous effects from the use of anociassociation. Some may say that George Crile has dreamed, and that his theories are not permanent contributions. Can any one doubt that his contribution to the saving of countless lives, by advocating measures to bring the poor risk patient to such a condition that surgery will have less hazards,—can any one doubt that he has taught the value of gentleness? What has made possible his dreams, if it is not familiarity with surgical literature and accurate evaluation of his experience?

Let us ask ourselves the question, why is surgery? Its one excuse is that the patient has some condition which is potentially more dangerous than the method proposed for its relief. If this is true, and it must be, then a pioneer who blazes a trail to lower morbidity and mortality, has gained a niche among the immortals. The contributions of Crile must have been one of the inspirations of the great American Institution, the American College of Surgeons. The college has made possible a condition which permits the judgment of the individual to be questioned by his fellows at a Staff meeting. We all appreciate that one will exercise every bit of reason, when he knows that his action may be subjected to question by his fellows.

How many appendices have been removed for right sided pain, when later a renal calculus has been revealed. How often has a gastro-enterostomy been done, when later,—gastric crises of tabes have proven the error of a too swift current which has swept the unfortunate patient to the table. How many patients with cancer of the rectum have extensive operations done without knowledge of the futility of the procedure, because of the existence of a metastasis to the liver.

Head injuries which in the not distant past were submitted to surgery as soon as the diagnosis of fracture of the skull was made by roentgen-ray methods, are now carefully studied before surgery is invoked. Illustrations typifying hasty and unwarranted operations could be multiplied.

Hasty operation on a patient with a head injury results in high mortality; conservatism saves life. The change in attitude of the surgeon towards head injuries has been a result of several factors; first, high mortality which follows immediate intervention, and second, appreciation of the fact that head injuries should be considered more from the standpoint of brain laceration and an associated increased intra-cranial tension, rather than bone damage. This change can be attributed more to the great work of that pioneer in Neurosurgery, Dr. Harvey Cushing, than any other individual or group. It may be worth while at this stage to see just what this change has been. Formerly when the diagnosis of fracture of skull was made operative intervention was proceeded with. Today it is conceded that fractures of the skull should be operated only when there is evidence of depression, or if there is evidence of an extra-dural hemorrhage,—middle meningeal syndrome. The routine in most cases is to determine if there is an increased intra-cranial pressure. The spinal manometer readily provides this information. Repeated spinal tappings, and the use of magnesium sulphate, glucose, or hypertonic salt solution, effectively lower the intra-cranial tension.

Will you for a moment consider with me, —fractures of the skull, handled by different men. One puts on an ice bag, does a spinal pictures, gives magnesium sulphate, has the eye grounds examined, watches the pulse rate and blood pressure; one operates hastily without the above precautions. The patient of the one recovers, and the patient of the other dies.

We may take the patient with evidence of brain tumor; one surgeon carefully tries to reduce intra-cranial tension by giving hypertonic salt solution, preoperatively, and before opening the dura, the lateral ventricle is punctured. Another surgeon in handling the same patient, may neglect these additions to technique and judgment, and he is surprised when a brain laceration, and a fungus immediately develop. The field is bloody, and what should have remained healthy brain tissue is damaged. The handicapped patient is thus maimed by the lack of judgment on the part of the surgeon.

In a paper of this type, it woud not do to elaborate on this subject. I am anxious to make clear the importance to both surgeon and patient of the surgeon being posted on current progress, so that he may

change his methods with the increase in human knowledge.

"New times demand new measures and new men,
The world advances and in time outgrows,
The laws that in our Fathers' days were best,
And doubtless after us some purer scheme
Will be shaped out by wiser men than we,
Much wiser by the steady growth of truth."
—*Kingston.*

What has been said of head injuries, applies equally well to vertebral injuries.

Until Thompson and Coleman protested, many unwarranted laminectomies were being done. It has been shown, that unless there is a spinal block, a laminectomy is not indicated. More than that, if we have evidence of complete cord severance, operative intervention will be futile.

We may for an instant turn to cases of intestinal obstruction, or even in cases of post-operative vomiting, what a fund of information can be gained by properly interpreting blood chemistry. The debt we owe to Haden and Orr for the work which they have done can not be overestimated. How many lives have been sacrificed in the belief that the patient with persistent vomiting had an acidosis, when in reality blood chemistry would have shown a high carbondioxid and low chlorid, the picture which we have learned to associate with alkolosis. If one is ignorant of this recent work, he may continue to give carbonates and thereby increase the CO_2. On the other hand, being familiar with the recent developments, the free use of chlorids may re-establish the balance, and the patient go on to an uneventful recovery.

Thoracic surgery, one of the youngest of the special fields, offers great opportunity for the exercise of judgment. Patients with empyema were formerly operated at once by rib resection. The value of delay in some of these cases was shown by the experience in the various Camps during the influenza epidemic in 1918. You will all recall the high mortality in cases operated before definite adhesions were formed. Then came the change, repeated aspirations were advocated until frank pus was found, and then resection could be done because adhesion had formed.

Abscess of lung, has in recent years demanded a great deal of attention, because of its frequency following tonsillectomies, or other operations. Hasty operations of these cases has resulted in an extremely high mortality. Conservatism in the early stages followed later by operation, lowers the mortality and saves a fair proportion of these patients.

Gallbladder surgery has been improved in recent years by the work of Evarts Graham. We now have a means of visualizing the gallbladder and arriving at a conclusion whether it is functioning or not. There are other points of value which certainly should be observed in the preparation of gallbladder patients for operation; among these should be mentioned, coagulation and bleeding time, to know whether there are indications for calcium therapy, or not.

In the anemic, exhausted patient proper preparation for surgery includes transfusion and proper feeding. By so doing you will bring happiness to families where only crepe and sympathy would be in order.

No place in surgery requires the exercise of greater judgment than surgery of the extremities.

During the last twenty years enthusiasm for operative intervention in simple fractures has caused a great deal of trouble. Simple, accurate anatomic methods applied early will obviate much unnecessary operating and disability.

The committee for the study of sarcoma of bone has done great work by indicating methods most effective in the handling of these cases.

The advent of Insulin has brought the diabetic patient in the category of a fair-risk patient, provided the surgeon avails himself of the co-operation of a well trained internist.

Having considered the question of what to do and when to do, let us briefly consider the third, how to do, or the preparation for operation or surgical technique.

To many a recent graduate, surgical technique seems a simple thing, particularly if he has been trained by real masters.

He often approaches his responsibilities unaware of the pitfalls which are about him. He should approach his responsibility in the full realization of the fact that the patient entrusted to him is dependent on his judgment and technical skill for whatever material aid it is possible to render. In accepting such a responsibility, the Golden Rule should guide us to "ascend the hill with clean hand and pure heart."

As we gaze upon the panorama which makes up the present "Ritual of a Surgical Operation," (Moynihan) and look into the future "as far as human eye can see," is it not right that we should look back just a bit and give a thought to those giants who have blazed the trail in the dense forest of human ignorance, that we might see the light of surgical truths.

Where would the surgical conscience be, had Hippocrates not lived and propounded the great oath which all should observe.

Where would we be without the teachings of Guy de Chauliac?

"Let the surgeon be well educated, skillful, ready and courteous.

"Let him be bold in those things that are safe, fearful in those that are dangerous; avoiding all evil methods and practices.

"Let him be tender with the sick, honorable to men of his profession, wise in his predictions; chaste, sober, pitiful, merciful; not covetous or extortionate; but rather let him take his wages in moderation, according to his work, and the wealth of his patient, and the issues of the disease and his own worth."

Where would technique be had not Pare given us the ligature; Pasteur, a knowledge of bacteriology; and Lister, antisepsis; Crawford W. Long, anesthesia; McDowell, abdominal surgery; Matas, modern conception of vascular surgery, and the host of other great minds who have prepared the way for us.

The real trial for the surgeon begins in the operating room. The ritual of surgical operation must be carried out in detail, otherwise disaster may come to his patient.

From the preparation of the field of operation to the discharge of the patient each link in the chain requires the most scrupulous care and attention. Each act must be performed with a definite reason, rather than automatically because others do certain things. Briefly, let us consider the following stages: first, the anesthetic; second, the preparation of the field of operation; third, operation itself; and fourth, immediate after care, which includes complications.

The selection of the anesthetic should be most carefully made,—many complications may be avoided by having an expert anesthetist. Fortunately, with the advent of the expert in this field interest increased, and the many long days of nausea, urinary suppression, hepatic insufficiency, and pulmonary complications, which were common in the days of chloroform and ether anesthesia, have disappeared. Fortunately, the use of chloroform has disappeared from our operating rooms. Ether by the drop method, or vaporized, and gas (nitrous oxid, oxygen and ethylene) have replaced the older methods.

The selection of an anesthetic involves knowledge of the patient's physical equilibrium, his kidney function, blood chemistry and the status of his heart and lung.

It is necessary for us to be mindful of the fact that each anesthetic has its dangers, and must be given with great care. I believe, that ether in the hands of the ordinary anesthetist is to be preferred to gas. Under all conditions, the patient must be carefully watched during the anesthetic and following it, for no anesthetic is fool-proof.

Field of operation. Those who apply in a perfunctory manner iodin for skin preparation hardly realize the amount of ex-

perimental work which was done to prove the greater penetrability of certain antiseptics, when compared to others.

Operation itself. Nothing aids in operating, more than a knowledge of anatomy. Compare the directness and rapidity with which one surgeon approaches the site of disease, with the indecision, sponging and handling of tissues, and the time consumed by another trying to locate himself. The one approaches directly his objective,—the diseased organ, protects other viscera from exposure, handles all tissue gently and completes his operation in a short time.

At this point, I do not mean to imply that hasty operation is a good thing, but anatomic knowledge will avoid unnecessary delay. Anatomic knowledge enables one to investigate for evidence of secondary involvment, whether it be infection, or metastasis from malignant growths. Appreciation of the route of spread of an infection, has lead to changes in the attitude of surgeon towards certain conditions.

Careless handling of tissues is an insult which lowers resistance and invites infection.

When the patient leaves the operating table our responsibility must not be delegated to House Officers, who are inexperienced, recent graduates. The patient has come to us, and not the inexperienced, recent graduate.

The patient needs rest and fluids. Rest can be obtained by the administration of hypnotics. One will be surprised how little pain follows where tissues have been handled gently.

Morphin should not be given promiscuiously in the ordinary abdominal case, because of its inhibition of peristalsis. Fluids must be supplied by rectum, hypodermoclysis and, when nausea ceases, by mouth. Nothing adds to a patient's comfort more than relief from thirst. It is our duty to do everything which will add to the patient's comfort and bring him safely through to that goal which made him seek our advice,—a return to health. In that way, the surgeon will prove to be like a sunbeam in a dungeon, or a star of hope to a patient wrapped in the darkness of despair, thus gaining for himself that spark of eternity or immortality which the human mind is capable of—Gratitude.

RECENT ADVANCE IN OPHTHALMIC SURGERY.*

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The progress of ophthalmic surgery has more than kept pace with the other branches of medicine. The trend of today is towards simplicity and practicability. We are learning to help the sick get well more painlessly and quickly, more completely and simply. We are beginning to understand how to avoid hairsplitting technicalities which have little or nothing to do with the patient's recovery. We are adapting our knowledge and skill more and more to the individual needs of each patient rather than adhering closely and rigidly to orthodox rules based upon the law of averages, and often upon the mistaken conceptions of the past. The slight differences of operative technique which we so frequently see usually only represent a surgeon's adaptation of certain basic principles concerning minor and usually important details. Methods which may be of value in foreign countries, however, are often not adapted to the needs of us more practical Americans. Distant pastures appear greenest and distant clinics are apt to infer a superiority which in reality does not exist.

OPERATIVE RISKS.

That rarest of jewels which we call surgical judgment really represents an intimate understanding of operative risks. The successful ophthalmic surgeon not only understands eye operations, eye and

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general diseases, but above all, human beings. He adapts his skill and knowledge to the individual needs of each patient.

Generally speaking, we all know that those who are healthy and happy get sick less often and that their chances of recovery are better. So in ophthalmic surgery the general well being of the patient often decides the success or failure of even the most skillfully performed eye operation. Active syphilis probably increases the risks of delayed healing sufficiently to justify preliminary treatment unless, of course, urgency is necessary. The same is true of severe infections involving the teeth, tonsils, sinuses, appendix, gall-bladder, etc. Less severe extra-ocular infections may or may not justify preliminary general treatment. The only safe guide is the Golden Rule. The cure must never be worse than the disease. In general sickness, like diabetes, it is often possible to reduce the constitutional factor to a minimum when the risks of ocular operation are not abnormally increased.

PREPARATION OF PATIENT.

Generally speaking, if eye surgery is to be successful, it must be painless, before, during and after operation. The accuracy and dexterity necessary to successful ophthalmic surgery is impossible in a pained patient. Fifteen grains of chloral and twenty grains of bromid about one hour before the operation relaxes the mind and minimizes that very uncomfortable and panicky feeling. Combined with perfected local anesthesia, there is no reason why practically any ophthalmic operation cannot be performed painlessly.

The conjunctiva nearly always contains an occasional staphylococcus, xerosis bacillus or diphtheroid. Unless the ocular tissues are especially sensitive to infection these do not contraindicate operation. Other organisms, however, such as the pneumococcus, streptococcus, influenza bacillus, etc., greatly increase the liability of infection because after intraocular operation they so often invade the internal eye. During epidemics of pink eye the risk of post-operative infection is greatly increased. Some surgeons can apparently determine the number and character of organisms by simple inspection of the conjunctiva; others insist upon a smear and culture. The important thing is not to operate if the risks are unjustified.

Where the conjunctival flora is practically normal, liability to post-operative infection is further reduced by copious irrigation with a sterile, non-irritating solution. No one formula apparently has any decided advantage. Care, thoroughness and cleanliness are what really count. In the European clinics forceful and copious irrigation with a 1-5000 oxycyanid of mercury solution is most frequently used. At Guists' clinic in Vienna, this is supplemented by gentle massage of the conjunctiva near the upper limbus with a cotton tampon dipped in the oxycyanid solution. The application of a 5 per cent iodin solution to the lashes and lids possibly further reduces the frequency of post-operative ocular infection.

Regional anesthesia in ophthalmic surgery marks a new era in making our surgery painless and safe. The eyeball receives its sensation principally through nerves from the conjunctiva, the extra-ocular muscles and those which enter at the posterior pole. The first is anesthetized by the installation of a few drops of 4 per cent cocain or 2 per cent butyn solution. The second requires anesthesia only in extra-ocular operation, such as enucleation, and the third is probably best anesthetized with 5 to 10 minims of a 2 per cent novocain solution injected near the upper temporal orbital apex. A 1½ inch 30 gauge needle is introduced in the skin or conjunctiva near the temporal orbital floor and directed gently upwards toward the upper temporal orbital apex as far as the needle will go. A ten minute delay is advisable. Satisfactory anesthesia is usually evidenced by a slight prompt pupillary dilatation. Combined with the drop and injec-

tion anesthesia, adrenalin not exceeding 5 minims is often of practical help.

OPERATIVE TECHNIQUE.

It is interesting to note how many slight differences have arisen in the ophthalmic operating room and how few important ones. In the European clinics immature senile cataract is much more frequently operated upon in order to reduce the unpleasant period of waiting for maturity. Although American ophthalmologists, as a class, feel that this waiting period is justified by quicker healing and better visual result, the use of suction, anterior chamber irrigation, and spoons for removing cortical debris apparently make their visual results and convalescent period about the same as ours. Akenisis or injection of the orbicularis muscle with anesthetic solution to prevent lid squeezing during intra-ocular operation is regarded as one of the greatest newer safeguards in ophthalmic surgery. A further improvement in the same direction is the routine use of canthotomy as practiced in Axenfelds' clinic, which has the advantages of enlarging the operative field markedly, and of preventing squeezing of the lids not only during operation but for the next several days as well. The injection for akenisis and canthotomy is the same and is accomplished by one cc. of 2 per cent novocain solution introduced slightly back of the temporal orbital wall and deeply injected into the tissues of the upper and lower temporal lids extending to the margins.

CATARACT EXTRACTION.

Of the many and varied methods of ocular fixation the use of a suture under the superior rectus tendon, as introduced by Elsching, promises to be more or less universally adopted.

The tendency of today is toward broad conjunctival flaps. Among the interesting adaptations is that of Von Blascovics, of Budapest, who undermines the entire upper ocular conjunctiva at the limbus and fixes it by two sutures to cover the whole upper cornea thus protecting the entire incision against infection, injury and iris prolapse.

Increased risk of vitreous loss has prevented the general adoption of intracapular extraction. The Barraquer suction and the Smith intracapular operations do not seem well adapted for American ophthalmologists and patients. The Torok-Knapp extraction with non-tooth, capsule forceps promises to be more widely used. Let us not forget that cataract extraction is a slight of hand trick as much as any seen on the vaudeville stage. Each surgeon must decide for himself how he can do the trick best and with the fewest failures. A technique that is brilliant and successful for one may be only a dismal failure for another. In most instances slight variation of technique make no appreciable difference in the visual result and that is what counts. Take for example the Hess operation in which a small peripheral iridectomy is made immediately after the lens is extracted in order to retain the round pupil. This operation is done very frequently in Europe and is relatively rare in America. In reality the visual result is practically the same as with our ordinary combined extraction.

AFTER TREATMENT.

The widely different methods used in the post-operative treatment of cataract and other intra-ocular operations with practically identical results show that the bandaging of both eyes and the keeping of patients in bed for a week and many other details that have been accepted as gospel, must not be taken too literally. The eye must be reasonably protected from handling, injury and infection, and there is no one single method of doing this which stands out in bold relief. We have learned that too much handling after operation frequently does harm. Irrigation can only introduce organisms from the lids, etc., which were not previously infective to the eye.

GLAUCOMA.

Practically all glaucoma operations are designed to reduce increased tension by:

(a) Increasing the filtration space at the angle of the anterior chamber as with anterior sclerotomy; (b) excising a piece of the iris root as with iridectomy; (c) replacing the aqueous with presumably more filtrable fluid as with parecentesis; (d) producing an easy outlet for the surplus intraocular fluid and a drainage bed for its distribution as in the operations of LeGrange and Elliott. Sclero-iridectomy is a combination of the first three principles and possibly the fourth, as is also the trephine operation. Generally speaking, the Elliott technique is best adapted to non-inflamed eyes because of its somewhat increased traumatism, while sclero-iridectomy is best adapted for inflamed eyes. The amount of increased drainage necessary and the traumatism that an eye can survive really must decide the type of operation and its success. Iris incarceration, as introduced in the operations of Borthen, Holth and others, although opposed to the teachings of the past, is apparently being more widely and successfully used. Cyclodialysis, as introduced by Elschnig, Gradle and others, is apparently effective in some hands and equally ineffective in others.

ENUCLEATION.

The world war, amongst other things, proved that the suturing of Tenon's capsule, conjunctiva, extra-ocular muscles, etc., are of little importance in the appearance of the subsequent artificial eye. It is traumatism of the orbital tissues that really matters because every cut means a scar, which, in turn, means a worse fitting artificial eye. Regional anesthesia has made this operation absolutely painless, simple, and rapid, in that two to four minutes is the average duration.

Any foreign substance introduced into Tenon's capsule will be extruded, absorbed, encapsulated or vascularized. The last is the ideal, which thus far has not been entirely attained. Implants of cartilage or tendo Achilles preserved in alcohol, or formalin, have been used during the past ten years with moderate success, as have cancellus bone and inorganic substances.

LACRIMAL SAC.

Excision of the lacrimal sac continues to hold its own, nothwithstanding the many newer operations, including those which attempt extensive drainage directly into the nose, as in the technique of West, Toti and others.

MUSCLE OPERATIONS.

Tenotomy is relatively simple but somewhat uncertain in that the effect ranges from 15 to 25 degrees, and always impairs ocular motility to some extent. Resection, advancement, and tucking, accomplishing practically the same result in a somewhat different manner, are more uniform in their effects, but are limited to about 10 degrees. Occasionally, a combined tenotomy and resection is of service. No operation, of course, really permits the patient to do without correcting lenses if the refractive defect justifies their use.

CONCLUSION.

In placing before you recent advance in the ophthalmic surgical world, including several observations made in the eye clinics of Europe in the last year, I have purposely avoided the spectacular novelties in our specialty which appear alluring but lack the fundamental merit that is necessary for permanent use. There is a legitimate place for experimental methods, which, however, must not be used as a smoke screen for impractical or otherwise fundamentally unsound surgical procedures which can only result in disaster for the patient. After all is said and done it is not the beautiful technique but the increased comfortable eyesight of a human being that decides the real value of any operation.

DISCUSSION.

Dr. E. L. Posey (Jackson, Miss.): This is a very interesting paper and one of great value. Dr. Smith has presented the subject in such a way that all present, whether ophthalmologist, surgeon or internist, can enjoy and appreciate what has been said.

When we view the field of eye surgery and the progress made during the past century we are gratified to know our specialty has kept pace with the other specialties. We are also pleased to know that America has produced some of the greatest eye men anywhere to be found.

I think there are several reasons why better ophthalmic surgery is being done now than in years gone by, but the main reason is better and closer study of cases or patients. Before any operation is done, except an emergency, a thorough physical examination is made, and if the patient's condition is such that he is not a good surgical risk he is placed in the hands of an internist who looks after this patient and corrects the ailment as nearly as possible so that he becomes a better surgical risk.

Improvement in operative technique has wonderfully helped ophthalmic surgery, and as the doctor stated the bacteriologist has helped us greatly. Before operating if secretions are at all suspicious or abundant, an examination of them should be made. This has done much to advance eye surgery and has enabled the eye man to look back over his work and see fewer infections and fewer eyes lost by infection.

Great strides have been made in anesthesia, as the doctor has said. I want to mention especially regional anesthesia and commend it to you gentlemen. In the absence of extreme trauma and infection any eye operation can be painlessly performed with this procedure. Injection of the orbicularis muscle before cataract operations will prevent squeezing, resulting in loss of vitreous and a possible loss of the eye in a large number of cases.

Dr. Smith spoke of the different operations done in various parts of the world for cataracts. I believe the American surgeons are the most conservative and in this country better results in the largest per cent of cases are being obtained by the combined extraction and the conjunctival suture.

He spoke of the after treatment of cataracts and other intra-ocular operations. No one rule can be applied to all cases, but I believe that better results can be obtained in such cases if both eyes are bandaged and patients are kept in bed for a few days. I think the fewer dressings done in these cases the better.

Speaking of glaucoma and the operations done for this most serious eye ailment, I, like the essayist, think the best results can be had by a broad basal iridectomy or the trephine as done by Elliott. Other operations are done but I believe these two offer most in the greatest number of cases.

I certainly believe with Dr. Smith in what he said in reference to the lacrimal sac. I believe the only successful way to treat a diseased tear sac is to excise it .

Muscle work is the most difficult of all eye operations. Here again, as Dr. Smith points out, the surgeon must decide what operation can accomplish most in each case. All cases of improper muscular balance should be refracted and correcting lenses prescribed.

I consider it a privilege to discuss this paper in my feeble way, and want to say in conclusion that I enjoy it, and to Dr. Smith we are glad to have him with us.

Dr. B. S. Guyton (Oxford, Miss.): I am sure we are all glad to have Dr. Smith with us today. As he told you, he does not go into the minor details of surgical technic but has given us some very practical ideas. He spoke of surgery and the infections—surgery in face of infections. I think nothing can illustrate this better than a case I had a few days ago. Last year a man came in to me totally blind in one eye, with apparently absolute glaucoma. He had very severe pain. I did an Elliott trephine operation for the relief of pain and had very good results. Perhaps I was somewhat careless about infections. Anyway, he came back a few days ago with beginning acute glaucoma in the other eye. I gave him a complete physical examination and found he had some badly abscessed teeth. He had them attended to and came back in a few days with the eye much improved. A peculiar thing is that the eye that had been blind for over a year is beginning to show some slight return of vision. It is certainly a good thing to go into infections carefully.

I see it advised by a clinic in New York to use argyrol for a few days before operation. I think, as a prominent eye man said, argyrol is a dangerous drug—dangerous in several ways. First, people will use it when atropin is needed or when some other drug is needed. Argyrol is not a cure-all drug, and I think we ought to condemn its general use, for many times it will be used when something more radical is needed. Argyria is also produced frequently.

As to the injection of the orbicularis, I have been using that for a year or so and find it a great help in keeping patients from squeezing the eye after operation.

Dr. Smith mentioned the conjunctival flap. That is becoming more popular in the last few years, particularly the conjunctival flap with suture. Dr. Berens, of New York, is using a conjunctival flap with continuous suture. I have been using it for several years. I turn the flap down first to the limbus and, instead of using a Graefe knife, use a keratome and then enlarge the incision by scissors. I do not know why I prefer

this except that a conjunctival flap can be protected better. I was glad to see in the New York Eye and Ear hospital a doctor who had been using this method for years.

Dr. Wiener of St. Louis, in what is called the Jackson birthday volume, which came out last year, describes in a good deal of detail an operation he is using for what he calls opaque cornea. He admits that he has more failures than he has good results but at the same time thinks the risk is justified, the patient having no sight at all. In this operation you skin the cornea down to the Descemet's membrane, taking off all the corneal substance down to Descement's membrane. This will in some cases give you some vision. While you get more failures than you do good results, yet it is worth offering to these cases that are hopelessly blind from opaque cornea.

As to glaucoma, I have used a number of operations. In one case I used the iridotasis operation, in which you pull the iris up into the limbus wound, and in the same case used the LaGrange on the other eye. The iridotasis did not prove successful; with the LaGrange operation it proved successful. You also hear some oculists claim that the LaGrange operation is so much more likely to have after infection. In one case I used the LaGrange operation in one eye and the Elliot trephine operation on the other eye. With these two both got along beautifully for about three months. In about three months I had an infection in the eye in which I had done the LaGrange operation but did not have infection in the eye in which I had done the trephine operation.

Dr. Smith spoke of suturing the extra-ocular muscles, Tenon's capsule, etc. In the only case I have ever participated in in which the muscles were sutured I was simply assisting another surgeon. The patient came to me later to have the artificial eye put in, and the socket was so contracted that it was impossible to put in anything except an infant eye. Since that time I have never sutured the extraocular muscles, and I think the practice should be discontinued.

I certainly appreciated the doctor's paper.

Dr. Smith (closing the discussion): It is my custom and the custom of most of us in America, after intra-ocular operations, to put the patient to bed and keep him in bed for a certain length of time, varying with each one of us. However, in a great many of the clinics of Europe the practice is exactly the opposite. They operate on a cataract, even operate on both eyes, and after the operation allow the patient to get up and walk around the room. Their results are practically the same as ours. I mention this to show the diversity in practice.

In my own experience canthotomy stands out as one of the greatest advances in ophthalmic surgery. I remember the time when I approached a cataract operation with dread, for I never knew when the patient was going to squeeze or lose control of himself and possibly cause the loss of the eye. But in canthotomy you have absolute control of the patient. It can be done very simply, does not need any suturing after operation, and I think is one of the greatest aids that has been brought forward in intra-ocular surgery.

Dr. Guyton mentioned the use of argyrol. I personally use argyrol sometimes but not a great deal. I saw one rather well known surgeon use it in an interesting way. He used it before the operation to clean the conjunctiva as many of us do. After the lens was extracted he lifted the cornea and put two drops of 20 per cent solution of argyrol in the anterior chamber and then bandaged the eye.

PRE-ECLAMPTIC TOXEMIA.*

H. VERNON SIMS, M. D.,

NEW ORLEANS.

Upon no problem in obstetrics has so much effort been expended as in attempts to determine the cause of toxemias of pregnancy. The extensive chemical research undertaken in recent years has failed to afford an acceptable explanation for the basic phenomena. They have reflected the results of derangements which occur in various organs, but no light has been thrown on the etiology. Our knowledge in this field is but little more than it was a quarter of a century ago. Little real progress as to the etiology can be made until it is possible, either to identify positively the causative toxic substances or to reproduce in experimental animals the characteristic clinical syndromes, as well as the microscopic and chemical features of the toxemias of pregnancy.

Pre-eclamptic toxemia is in all probability due to the formation of some toxic substance which leads to a profound disturbance of metabolism, accompanied by certain organic lesions; but what it is, or whether it originates primarily in the child, the placenta or the mother is not known.

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*Read before the Louisiana State Medical Society, New Orleans, April 27, 1927.

In the chemical study of the blood, the percentage of non-protein nitrogen and blood urea nitrogen remain unchanged. There is a marked increase in the uric acid content, and equally striking increase in the amount of sugar and lactic acid, and to a lesser extent in organic phosphorus, while at the same time, in extreme cases, the carbon dioxid combining power of the blood is reduced to such an extent as to offer a distinct menace to life from acidosis. These figures will again be referred to when the question of treatment is taken up. Stander has shown that all general anesthetics (chloroform, ether, nitrous oxid and ethylene) after as short a period as fifteen minutes produce changes in the blood suggestive of those noted in eclampsia; namely, a definite increase in uric acid, sugar, lactic acid and inorganic phosphorus, and a decrease in the carbon dioxid combining power of the blood.

SYMPTOMS.

Pre-eclamptic toxemia usually appears in the latter part of the second half of pregnancy. It should be suspected whenever the patient complains of headache, lassitude, or edema, and presents a high blood pressure, but particularly if the urine is diminished in amount and contains albumin. The symptoms may be slight or they may indicate a profound toxemia. There may be a tendency to nervous excitation or to sleep, occasionally slight mental unbalance, twitching in the muscles, cramps in the calves, nausea, vomiting, pain in the epigastrium, and disturbances of the special senses, spots before the eyes, bright lights, sometimes described as spangles, dimness of vision, even complete blindness, ringing in the ears, even deafness, and occasionally anomalies of taste and smell. Prodromata are present from a few hours to several weeks before the actual outbreak of eclampsia and should draw attention to the patient.

Any of the above symptoms should serve as a warning and a thorough examination of the patient made. This will usually show swelling of the feet, hands and eyelids, or more or less general edema, with pasty skin, a coated tongue, tenderness over the epigastrium (the site of the pain) and over the liver, high pulse tension, high (or rising) blood pressure, exaggerated reflexes, and diminished urine of a high specific gravity with albumin and casts. The patient may give a history of a recent rapid gain in weight which is due to the edema. These are the symptoms of pre-eclamptic toxemia and a patient presenting them may be said to be threatened with eclampsia.

TREATMENT.

Again we make the plea for close observation of all obstetrical cases from the very beginning. It is so important for the attending physician to know each case even in the early months so that he can understand any change in her condition. At times a patient who has an unusually trying time in the early months will feel better during the fourth, fifth, sixth, and seventh months, and then develop symptoms of pre-eclamptic toxemia in the eight month. Every case should have the blood pressure taken at least every other week (and the urine examined) until the beginning of the eighth month. After that the urine should be examined and the blood pressure taken at least every week. A blood pressure of from 130-140 may not be high for some patients but would be alarming for one whose systolic pressure had been closer to 100 during the preceding months. Again, all patients should be warned of the above symptoms of toxemia so that a report can be made to the attending physician at the earliest possible moment. Every pregnant woman should be considered a possible candidate for eclampsia.

When the first signs or symptoms of toxemia occur, treatment must be at once instituted. The patient should be put to bed and should depend solely upon milk for a while. Milk is not only an excellent food, but is an efficient diuretic as well. She should be given two or three quarts in the twenty-four hours, and should be

made to take large quantities of fluid in the shape of plain water or lithia water. If the condition improves, starches are added to the diet, then the protein vegetables, with the vegetable oils and butter. If the improvement is satisfactory, full vegetation diet with the fruits and one egg a day are allowed. Later a little fish, or chicken is added but never a full meat diet.

A brisk purge with magnesium sulphate is given at the start and the bowels are kept open by salines. If the symptoms of toxemia are urgent, hot wet packs are ordered twice daily. The skin should be kept free from chill by woolen undergarments, which should be worn even in summer. A valuable means for starting the skin and kidneys is the subcutaneous injection of normal salt solution or 5 per cent glucose solution, 1000 cc. being given under the breasts twice in twenty-four hours.

When the toxemia is severe, even though eclampsia does not develop, the child suffers, and numerous cases terminate in the spontaneous expulsion of a dead premature fetus. When treatment has been faithfully carried out and has failed to produce sufficient amelioration of symptoms, the pregnancy should be terminated. The symptoms which indicate the near approach of convulsions are: headache, seeing colored lights or spangles; twitching of the muscles, somnolence, insomnia or hallucinations, nausea and vomiting, pain in the epigastrium, general edema, high blood pressure and marked albuminuria. All of these symptoms are not always present and at times one or the other may stand out very prominently. When this picture is before us we must conclude that eclampsia is in the offing, and that it is wisest to terminate the pregnancy.

METHODS OF INDUCING PREMATURE LABOR.

The method of terminating the pregnancy should be selected which will empty the uterus quickest and with least danger to the patient. If the case has been carefully studied the symptoms should not be so threatening as to demand undue haste. Probably the main reason that induction of labor is less frequently resorted to by obstetricians, and scarcely thought of by general practitioners, is its formidableness when done with bags and bougies. I wish to call your attention to the value of castor oil, quinin and pituitary extract in the induction of labor. This was brought out by Watson and others and later modified by Mathieu. Intrauterine manipulation, early rupture of the membranes, dislodgement of the presenting vertex, prolapse of the cord, laceration of the cervix and jeopardizing of the patient in case cesarean section has to be resorted to, do not have to be worried about when the induction is made with castor oil, quinin and pituitary extract. Not only this, but there is not the added danger of increasing the patient's toxemia with the additional toxemia produced by any of the general anesthetics.

The method is as follows: The patient is given two ounces of castor oil and ten grains of quinin sulphate and exactly two hours afterward, a hot soapsuds enema is given and as the enema is about to be expelled, three minims of pituitary extract are given by hypodermic. This same dose of pituitary extract is repeated by hypodermic every thirty minutes until labor starts and no longer. From then on, the labor is conducted as though the onset has been normal. Failure is admitted and the procedure stopped if eight hours pass without labor being started, or if there is absolutely no sign of any effect toward the induction and the continual use of the hypodermic is too trying to the patient. In such cases, the procedure is stopped, the patient is given a hypnotic and after twenty-four or forty-eight hours the induction is again started. This method was successful in 96 per cent of Mathieu's cases (91).

Another method of inducing premature labor is to insert a bag into the uterus after the rupture of the membranes. Three minims of pituitary extract are given every hour until uterine contractions begin and it is not repeated unless the contractions cease. In primipara it may be necessary to

prepare the cervix by packing it and the lower uterine segment with gauze for from twelve to twenty-four hours. Pains are elicited, the tissues softened and the chances of injury to the cervix diminished. After the removal of the gauze the membranes are punctured, the amniotic fluid is drained off, and a bag is inserted. Then the three minims of pituitary extract are given every hour if necessary. The dilatation of the cervix may be hastened by attaching a weight to the bag. When the bag is expelled the child soon follows. Cesarean section is reserved for the case with contracted pelvis or central placenta previa.

When we think of the large number of prospective mothers who are not under the care of a physician we realize the danger they are in as pre-eclamptic toxemia occurs several times in every one hundred pregnancies.

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DISCUSSION.

Dr. Maurice Gelpi (New Orleans): I feel that a word should be said about Dr. Sims' excellent paper and that we should be grateful to him for bringing up this topic, if for no other reason than to remind us of the importance of pre-natal care and close observation of our obstetrical cases throughout pregnancy.

I feel about eclampsia pretty much as I do about carcinoma of the cervix, that is, that the method that gives the best results is to try and treat the precursors of the cancers, erosions and lacerations, before the cancer comes—in other words, the problem resolves itself into spotting the pre-eclampsia.

Eclampsia can be divided into two main groups: the advanced cases where you have ostensive eclampsia, less coma and convulsions; these are pregnancy cases and run about 5 per cent. The second group is the pre-eclamptic; these are the cases you want to watch. The mortality is much less—the majority of them clear up with rest in bed and a bland diet, and sometimes require rapid and complete evacuation of the uterus.

The lesson we have learned from Dr. Sims' paper is that it is necessary not only for us to look for albumin in our pregnancy cases, but see that we check up on their blood pressure, talk to them about their cases and in this way learn about the pre-eclamptic symptoms.

Dr. Arthur Caire, Jr. (New Orleans): I think there has been enough said about watching cases early or throughout the pre-natal stage, but there are a couple of points brought out by Dr. Sims' in his paper which I would like to emphasize, one of which is scanty urine. Most patients when they come to you complaining of pre-eclamptic toxic symptoms will never mention this fact unless you dig into their history and find out about it. The thing of most value in these patients is not to notice whether they are passing less urine or not, but to save all of the urine they pass from a certain time; measure it yourself—do not rely on them, they are not going to be accurate. The diminished amount of urine, to my mind, is one of the most important symptoms as to the severity of the condition that I can think of.

Blood chemistry has not helped me very much in the early stage to differentiate between those cases in which we should do something and do it right away, or those cases best treated by rest, quiet and other sedative measures. I have not been able to satisfy myself that blood chemistry has helped me. The only cases where we do see marked changes in blood chemistry is in cases we see with our own eyes and judge from the symptoms present the severity of the toxemia. I have not been able to find, in our work at Touro, that it has helped us very much, but it has been of help in determining the type of treatment we wish to use in these particular cases. All of our patients get cereals as well as milk; we put them on a milk and cereal diet. The reason is that a good many of these patients develop acidosis. If the CO_2 volume is depreciably low, we give them glucose, not subcutaneously, but intravenously. We find that we get better results in cases of marked acidosis if the glucose is given so that it gets in the system as rapidly as possible.

As far as the induction of labor is concerned, I have also tried the medical manual induction and found that it fails in all of these cases where the toxemic systems are marked. If you have a case where toxemia is not great, the medical induction will work quite well, but if pronounced enough to induce labor rapidly, I have found that the other method, principally the bag, of more value. The reason why perhaps I have not been able to get any results with the Medical induction is that the patient primarily has a uterine inertia due to toxemia and we must resort to more drastic measures. Catheters, etc., do not act as well as a bag. Of course, introducing the bag is exposing our patient to infection, but I do not think that is to be worried about if we are care-

ful of our asepsis and our patient is in a well regulated maternity hospital. We are not doing cesarian sections except in the type of cases mentioned by Dr. Sims.

The thing that has impressed me most with these pre-eclamptic states is the difficulty in differentiating between your true pre-eclamptic toxemia and your nephritic toxemia. We do know all cases of toxemia should have something done for them. One point I want to bring out is that the nephritic toxemia, true toxemia due to nephritis, an old kidney lesion, is not the type of case that can be dallied with at all. I mean we cannot even try ameliorative measures. In the pre-eclamptic type we can do that with safety, but my experience is that as soon as we make the diagnosis of nephritic toxemia, the sooner the uterus is emptied the better. We do not treat them all, we immediately induce labor. The pre-eclamptic can be benefitted and we usually treat them tentatively for several days by rest, purgation, etc., and after amelioration of their symptoms takes place we induce labor. In the nephritic we do not stop for that, but act promptly.

It has been my method in the last few months to employ theobromin in these cases where you have an almost complete shutting down of kidney function: it works very well. My first experience with this medication was a patient whose twenty-four hour urinary output was sixteen ounces. After putting her on theobromin, five grains every four hours for twenty-four hours, the second twenty-four hours her urine output had increased to ninety-six ounces. I had never heard of its being used in these cases before, but was advised by a medical confrere, with whom I had seen this patient, to employ it.

Dr. R. McG. Carruth (New Roads, La.): Dr. Sims said nothing about the theory of blood letting, or of the practice of hypodermoclysis with normal saline solution, and it is often that the doctor is called only after the eclamptic seizure has come on. Indeed, too often, it is only because of the seizure that he is called. Fifty years ago, when I was a student of medicine, these methods were advocated and I have gotten such good results from the treatment by using clysters and hypodermoclysis of saline, at the same time bleeding my patient under the influence of chloroform, that I am wondering if, in the adoption of newer methods the older, and at one time satisfactory method, had been dropped altogether?

Dr. H. Vernon Sims (closing): You will notice that in my paper I purposely avoided discussion of eclampsia, because at the present time there is so much controversy as to its proper treatment. My idea is, if you can, not to have eclampsia.

I believe that eclampsia can be prevented in the great percentage of cases, though I grant that we occasionally hear of a case of eclampsia where the patient had been watched and the attack comes like a bolt out of a clear sky. This would hardly occur if the patient had been questioned carefully, or if she had been warned of certain symptoms to report to the attending physician. I do not believe that it develops all of a sudden and I think we should direct all of our thoughts towards avoiding eclampsia. The attending physician must study each patient, you must know your obstetrical case clinically, when she feels well, looks well, or when she is presenting certain subjective or objective signs or symptoms which should serve as a warning.

In regard to the method of terminating pregnancy, if that becomes necessary, you may have to use a bag, but why not try this simple way of terminating pregnancy. You do not have the added danger of an anesthetic and no intrauterine manipulation is necessary. If you are not successful with the simple method then the bag may be used.

Venesection is still advocated by some in cases on the border line of eclampsia. Five per cent glucose solution given subcutaneously or intravenously is also a valuable therapeutic measure.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about Three Hundred Dollars, will be made on July 14, 1928, provided that an essay deemed by the Committee of Award to be worthy of the Prize shall have been offered.

Essays intended for competition may be upon any subject in Medicine, but cannot have been published. The essay should represent an addition to the knowledge and understanding of the subject based either upon original or literary research. They must be typewritten, and in English acceptable for publication without necessity for editing by the Committee. Any illustrations should be appropriate and correctly annotated with the text. Essays must be received by the Secretary of the College on or before May 1, 1928.

Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelop having on its outside the motto of the paper and within the name and address of the author.

It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award.

The Alvarenga Prize for 1927 has been awarded to Dr. Emil Bogen, Cincinnati, Ohio, for his Essay entitled: "Drunkenness."

JOHN H. GIRVIN, Secretary,
19 South 22d St., Philadelphia, Pa., U. S. A.

INTERPRETATION OF TOTAL WHITE AND DIFFERENTIAL BLOOD FINDINGS.*

C. E. HAMNER, M. D.,‡

SHREVEPORT, LA.

The proper interpretation of total white and differential blood findings may seem very elementary, but I find many physicians are not able to interpret the blood findings, especially when they do not agree with the clinical picture. For example, the interpretation is often confused in a case of appendicitis where the total white count is six to eight thousand with neutrophiles seventy-five or eighty per cent, or in a case of typhoid fever where the total white count is eleven or twelve thousand with a differential count of eighty-seven per cent neutrophiles for, as you know, we are taught that in appendicitis there is a leukocytosis, and in typhoid fever there is a leukopenia with an increase in the small lymphocytes in the differential count. The time alloted will not allow me to go into all the details of the value of the interpretation of the total white and differential count, but I shall endeavor to explain the interpretation in the type of every day cases which the hemocytologist has to consider. I beg leave to mention a few elementary facts and from these cite cases where the blood findings do not agree with the clinical case in question.

We know the normal total white count is from five thousand to ten thousand and that the average count is seven thousand five hundred. Any count above ten thousand may be considered leukocytosis, and a higher count a pathological leukocytosis; a count below five thousand is a leukopenia. We know that in the normal differential count of one hundred cells, neutrophiles are sixty to seventy per cent, large lymphocytes one to five per cent, small lymphocytes twenty to thirty per cent, eosinophiles one to three per cent and basophiles five-tenths per cent. Dr. Cummer is of the opinion that the normal differential count should be as follows: neutrophiles sixty to sixty-four per cent, large lymphocytes one to five per cent, small lymphocytes twenty to twenty-eight per cent, eosinophiles one to three per cent and basophiles five-tenths per cent. You will note that in my classifications I do not mention transitionals and unidentified cells. Dr. Cummer's statements are: "It is now felt that transitionals are mature forms of large mononuclears and should be grouped with the latter in the differential count. Their name is a misnomer, since at present they are not considered as transitional forms between large mononuclears and neutrophiles." Dr. McJuukin says that the difficulties underlying the identification of cells in the peripheral blood stream can not be emphasized too much. Much more difficulty has been encountered in identifying cells in the mononuclear group. That the majority of mononuclear cells are lymphocytes seems certain, owing to their morphologic and functional identity with the cells of lymphoid tissue and the presence of some of these cells in the large lymph vessels. "Transitional leukocyte" is a term commonly given to leukocytes that have a nucleus more or less horse-shoe or saddle-back in shape. The views of the origin and identification of this cell are almost as numerous as the publications themselves. Most of the recent workers agree that this cell has granules when treated with polychrome stain that can not be readily differentiated from neutrophilic granules; that it has neutrophilic granules with Ehrlich's triacid stain and that it gives the indophenol reaction.

Another common term in blood work is "large mononuclear leukocyte." As in the case of the transitional cell, this term, in regard to the use of which there is little uniformity, is not a histologic one and gives no indication of the origin of the cell. It differs from the transitional type especially in not having a horse-shoe

*Read at meeting of Louisiana State Medical Society, New Orleans, April 26, 1927.

‡From the Ellis & Butler Laboratories, Shreveport, La.

shaped nucleus. There is not proof at hand that most of the cells classified under these two terms (transitional and large mononuclear) arise from the endothelium of certain blood and lymph vessels. Quoting from Dr. Nageli: "There is no distinct boundary between large mononuclears and transitionals. The position of the large mononuclears in the classification of leukocytes is still very uncertain." Dr. Ehrlich's school regards them as quite immature elements of the bone marrow at an earlier stage of development than the myelocytes. Dr. Pappenheim thinks that they belong to the lymphocytes, while Nageli considers them especially differentiated matured elements of the myeloid group. They are frequently mistaken for large lymphocytes, but have more proptoplasm and a nucleus which stains rather faintly. Their differentiation is sometimes, however, very difficult. Potter states that transitional cells are very much like the large mononuclear leukocytes, except that the nucleus is quite irregular in shape and stains more deeply and the protoplasm exhibits a less distinct reticulum and contains a few fine neutrophilic granules. They are regarded as derivatives of the marrow and ancestors of the neutrophiles. They occupy a position between the exclusively pathologic myelocytes and the polynuclears, and are actually immature forms of the latter. In counting, they are usually included in one group with the related type of large mononuclears. So, from the diversified opinions, the above classification still holds good. Now the unidentified cells are not very often found and when found, must be classified according to some morphological characteristic. One will most often find that the unidentified cells is what might be termed an old neutrophile. The percentage of unidentified cells will be of no value in arriving at an interpretation of the blood findings.

We are taught that there is an increase in the neutrophiles in acute infectious diseases, cholera, small-pox, erysipelas, diphtheria, meningitis (including tubercular meningitis), scarlet fever, tuberculosis with marked sepsis, abscesses including empyema, the majority of purulent wound infection, eclampsia after hemorrhage, following the use of certain drugs (inhalations of chloroform or ether, and use of quinin, salicylates, phenacetin and morphin). There is an increase in the large lymphocytes in malarial cachexia and cachexia of carcinoma, Hodgkin's disease and lymphosarcoma. There is increase in the small lymphocytes in chronic infectious diseases; pernicious anemia; splenic anemia; diseases of the ductless glands; tuberculosis when uncomplicated; whooping cough; typhoid fever; influenza; rickets; measles; congenital syphilis and cirrhosis of the liver. There is an increase in the eosinophiles in certain intestinal parasites, especially hook worm; occasionally oxyuris, ascaris and the taenias; in trichinosis; in gonorrhea, particularly when there is involvement of the male posterior urethra, and the tubes in the female; certain skin diseases, notably, purigo, zoster, pemphigus, dermatitis herpetiformis; myelogenous leukemia; scarlet fever; brochial asthma; during convalescence from diseases accompanied by neutrophilic leukocytosis; in some cases of tuberculosis, and after injection of tuberculin.

I place a great deal of importance on finding eosinophiles following acute infectious diseases. One never finds the eosinophiles present in the differential count in an acute infectious disease where the total white count is fifteen thousand and above unless one of three conditions is present. First, an acute flare-up of an old chronic infection, as in appendicitis or gall-bladder infection; second, if the infection is being walled off or being handled, if you will, by the bacteriolysins or agglutinins, as in typhoid fever or body cell activity; and third, in acute gonorrhea, or an acute flare-up of an acute gonorrhea in male or female. I find the eosinophiles in acute gonorrhea are, as a rule, from one to three per cent in the differential count. In acute infectious diseases the eosinophiles must return

to the blood picture within twenty-four hours or the prognosis is not so favorable. Usually, when the eosinophiles return to the blood picture, there is a drop in the total white count of one to three thousand and you may have a corresponding drop in the percentage of neutrophiles. If the eosinophiles do not return to the blood picture within twenty-four to forty-eight hours and there is a drop in the total white count, the prognosis is grave. In typhoid fever, if the eosinophiles return to the blood picture after the beginning of the second or third week, the prognosis is good. If they do not return on the third, or beginning of the fourth week, look for the possibilities of complication.

We are taught that if there is a sudden drop in the total white count in pneumonia and an associated high differential count of the neutrophiles, an unfavorable prognosis should be given. In lobar pneumonia, however, where there is an involvement of another lobe, you will have a temporary drop in the total white count with, or without, a drop in the percentage of the neutrophiles. This condition could be considered as a negative phase and within two to four hours there should be a sudden rise in the total white count and the percentage of neutrophiles. If this rise does not occur within eight to twelve hours, the prognosis is unfavorable.

In cases where there has been a drain, if you will, on the neutrophiles, as in a severe septic condition, and nature is using its reserve supply of neutrophiles, you will note from one-tenth to one per cent of neutrophilic myelocytes. Do not at once arrive at the conclusion that you are dealing with a pathological leukocyte, for the fact is that nature is calling for more neutrophiles. In a septic condition, a falling total white count with a corresponding falling neutrophile percentage, with from one-tenth to two per cent eosinophiles, is indicative of the fact that there is a neutralization of the toxins or a walling off of the infection, and recovery should follow. But if there is a decided drop in the total white count and neutrophile percentage and no eosinophiles, one should be careful in making a favorable prognosis as there is a great possibility of a flare-up of the condition.

Sodern has drawn the following conclusions from the study of counts in pneumonia.

First: Slightly increased polynuclear percentage indicates slight toxic infection, regardless of the leukocyte count.

Second: Greatly increased polynuclear percentage indicates severe toxic infection, irrespective of leukocytic count.

Third: Slight leukocytosis with slight polynuclear increase indicates fair resistance and slight toxic infection.

Fourth: Pronounced leukocytosis with slight polynuclear increase indicates good resistance and slight toxic infection.

Fifth: Slight leukocytosis with pronounced polynuclear increase indicates poor resistance and severe toxic infection.

Sixth: Pronounced leukocytosis with pronounced polynuclear increase indicates a good resistance and a severe toxic infection.

Seventh: Absence of leukocytosis with pronounced polynuclear increase indicates no resistance and severe toxic infection and a falling leukocytosis with a rising polynuclear percentage indicates diminishing resistance and increasing toxic infection.

Eighth: A falling leukocytosis with a falling polynuclear percentage indicates diminishing toxic infection or recovery.

A continuance of a high total white count after a crisis, especially if associated with a high percentage of polynuclears, suggests some complication with pus formation.

Now we have the last of the white cells. The basophiles, you will note in the text books, are mentioned as being normally present in from two-tenths to five-tenths

per cent, but no mention is made of the significance of an increase in the percentage of basophiles. I find that when the basophiles along with the eosinophiles return to the blood picture after an infection the prognosis is more favorable. I have also noted an increase of the basophiles following hemorrhage, and their presence is to be considered favorable. A basophilic leukocytosis is also found in myelogenous leukemia and cholera.

BLOOD FINDINGS AND INTERPRETATIONS IN CASES WHERE THE BLOOD FINDINGS DID NOT AGREE WITH THE CLINICAL PICTURE

TYPHOID FEVER.

A young man, 27 years of age, returned from the oil field where there had been some typhoid fever cases, complaining of severe headache. Two days later he presented a decided clinical picture of typhoid fever. The total white count was 11,000, neutrophiles 84.1 per cent, large lymphocytes 2.1 per cent, small lymphocytes 13.8 per cent, no eosinophiles or basophiles. A twenty-four hour blood culture was positive for typhoid, and the clinical picture was pronounced. The total white count twenty-four hours later was 12,100, neutrophiles 87 per cent, large lymphocytes 0.4 per cent, small lymphocytes 12.6 per cent, no eosinophiles or basophiles. Widals in dilutions of 1-50 and 1-100 were negative. On the ninth day, the temperature staying near 100, the prognosis was grave. In the third week there was hemorrhage. The blood picture did not get anywhere characteristic of typhoid until the fifth week, and a positive widal in dilutions of 1-50 and 1-100 was atypical, with clumping but not complete loss of motility. The latter part of the sixth week there was a positive Widal of 1-50 and 1-100 dilutions and a corresponding return of the blood picture one would expect to find in typhoid. The infection lasted seven weeks and terminated by crisis. It was six months before the patient was able to return to work. There were three hemorrhages, one during the third week and two during the fifth week.

A CASE OF GONORRHEA, CLINICALLY APPENDICITIS.

A young lady, 18 years of age, went to her physician at 2:00 P. M. stating that she was suffering with menstrual cramps. He prescribed and at 4 P. M. he was called to come at once, as she was suffering the tortures of the damned. He found the young lady in bed with her right leg drawn up, and pain over McBurney's point and around the umbilicus. The temperature was 100 4-5°, pulse 132. There was nausea but no vomiting. I obtained blood for an examination and the physician gave morphin for pain. The blood findings were: total white count 14,985, neutrophiles 83.4 per cent, large lymphocytes 4.6 per cent small lymphocytes 9.7 per cent, and eosinophiles 2.3 per cent. Finding the presence of eosinophiles with the above blood picture, and taking into consideration the time the blood was secured after the onset of the clinical picture cited above, I was very suspicious of gonococcal infection. Urine was obtained by catheter and the examination showed a large amount of pus, the pus cells being loaded with gonococci. The patient was placed in the Sims position with an ice bag to her side, and three days later she was taking treatment at the office.

CASE OF ACUTE FLAREUP OF CHRONIC APPENDICITIS.

Blood was obtained four hours after the attack. The total white count was 8,250, neutrophiles 71.3 per cent, large lymphocytes 6.2 per cent, small lymphocytes 22.1 per cent, eosinophiles 0.4 per cent, no basophiles. Note the low total white and the presence of 0.4 per cent eosinophiles.

CASE OF ACUTE APPENDICITIS.

Blood was obtained twenty-six hours after the attack. The total white count 17,700, neutrophiles 79.8 per cent, large lymphocytes 5.6 per cent, small lymphocytes 14.6 per cent, no eosinophiles or basophiles. The prognosis was considered grave. We advised immediate operation and found a ruptured appendix, with no attempt of the omentum to wall the infection off.

CASE OF ACUTE APPENDICITIS IN BOY TWELVE YEARS OF AGE.

Blood was obtained six hours after the attack. The total white count was 12,250, neutrophiles 85.1 per cent, large lymphocytes 2.7 per cent, small lymphocytes 12.2 per cent, no eosinophiles or basophiles. Four hours later the total white count was 14,865, neutrophiles 87.2 per cent, large lymphocytes 1.6 per cent, small lymphocytes 11.2 per cent, no eosinophiles or basophiles. Twelve hours later, the total white count was 17,680, neutrophiles 98 per cent, large lymphocytes 0.6 per cent, small lymphocytes 1.4 per cent, no eosinophiles or basophiles. You will note that the total white count and neutrophiles are increasing in proportion. The prognosis was considered favorable but the patient wished to wait. The temperature was 102, pulse 140. Four hours later the total white count was 19,450, neutrophiles 79.8 per cent, large lymphocytes 3.1 per cent, small lymphocytes 17.1 per cent, no eosinophiles or basophiles. Result: a ruptured appendix, with no effort on part of omentum to wall off, the abdomen was drained and the patient was six weeks getting well.

CASE OF FOCAL INFECTION.

Patient, a male, 32 years of age. There was a history of fainting spells for the past three years, and at times unconciousness for thirty minutes after one of these fainting spells. He had been treated for autointoxication. The total white count was 3,250, neutrophiles 42.8 per cent, large lymphocytes 9.7 per cent, small lymphocytes 47 per cent, eosinophiles 0.3 per cent, and basophiles 0.2 per cent. The Wassermann was negative. Roentgenoram of the teeth showed five abscessed teeth. The tonsils were also infected. Three years after treating the infection the patient has not had any attacks as described above.

CASE FOR MALARIAL EXAMINATION

A male patient, 42 years of age, complained of just feeling bad. The total white count was 6,700, neutrophiles 52.7 per cent, large lymphocytes 4.8 per cent, small lymphocytes 35.2 per cent, eosinophiles 7.3 per cent. Prostatic examination was negative for Neisser infection. The stool was positive for hook worm ova.

CASE OF SELF-PRODUCED ABORTION (72 HOURS).

The total white count was 7,950, neutrophiles 88.9 per cent, large lymphocytes 3.4 per cent, small lymphocytes 7.7 per cent; no eosinophiles nor basophiles. The patient died three hours later.

CASE FOR LABORATORY HELP.

Female, 32 years of age. The appendix had been removed two years previously, and one year previously she had had the right tube and ovary removed. She was still suffering with headache, pain in the side referred to the gall-bladder, indigestion and general weakness. The total white count was 7,700, neutrophiles 48.6 per cent, large lymphocytes 10.7 per cent, small lymphocytes 40.3 per cent, and eosinophiles 0.3 per cent. From the above blood picture, there were four possibilities; focal infection, some endocrine condition, auto-intoxication or syphilis. The Wassermann was four plus positive. The patient was much improved after a few treatments. The case is still under observation.

CASE FOR LABORATORY HELP.

A baby boy 22 months old, had been sick for the past eight months. He had many ulcers in the buccal cavity, which looked like what are called "peptic ulcers." The baby was very restless at night, and in fact cried often during his sleep and would not eat unless forced. The lungs showed a evidence of a bronchitis. The baby had lived in the city all its life. The total white count was 26,250, neutrophiles 86.1 per cent, large lymphocytes 5.8 per cent, small lymphocytes 7.9 per cent; no eosinophiles, basophiles 0.2 per cent. The bronchial condition could have accounted for the percentage of neutrophiles; rechecking my differential count and counting 375 cells, neutrophiles were 82.9 per cent, large lymphocytes 4.7 per cent, small lymphocytes 12 per cent, eosinophiles 0.3 per cent, and basophiles 0.1 per cent. It was considered that the bronchial condition could have been causing the eosinophiles and basophiles; however, a stool examination was made and found to be loaded with hook worm ora. The patient made an uneventful recovery.

I believe that the reason why so many physicians claim that the blood examination is of no value is that they are always in such a hurry for their report that the laboratory has not time to make as satisfactory an examination as they would like to make and which would be of value in assisting in eliminating certain factors that should be considered. To make a satisfactory examination at least 100 neutrophiles must be counted, and with the large and small lymphocytes, eosinophiles and basophiles, you will have counted 160 to 180 cells; also the morphology of the red cells must be taken into consideration. So many physicians ask for "just" a total white count, and I have no hesitancy in stating that a total white count without the differential is of no value. To bring the above remarks more forcibly to your attention, I beg leave to state just one more case;

A baby girl, 7 years of age, was sent to the laboratory for "just" a total white count. I secured blood for a differential for my own satisfaction, as I did not know what to expect from the total white count. The total white count was 21,950, neutrophiles 80.4 per cent, large lymphocytes 4.5 per cent, small lymphocytes 14.2 per cent, eosinophiles 0.9 per cent, and no basophiles. I found the red blood cells loaded with tertian malaria. There had been some irregular chills. I asked the physician if I could secure a specimen of urine. The urine showed a large amount of pus and was loaded with bacteria. So the urine findings accounted for the high leukocytosis. The mother stated that she expected frequent urination during the fever, which was ranging from 102° to 105°. The malarial infction was masked by the urinary symptoms and would have been entirely overlooked if the differential count had not been made.

THREE INTERESTING CASES COMPLICATING SCARLET FEVER PROPHYLAXIS SERUM.*

M. S. PICARD, M. D.,
SHREVEPORT, LA.

I am writing this paper without any intention of condemning that which until now has proven satisfactory and experience shows to be useful; but presenting them to show that at times even our best methods can produce conditions that may be harmful. My experience with scarlet fever serum and prophylactic serum is based on the prophylaxis and treatment of scarlet fever in 1925-1926.

No one doubts the efficiency of the toxin antitoxin prophylaxis for diphtheria. The reduction of diphtheria cases in large immunized centers is sufficient to prove that we have a method equally as useful as vaccination for small pox. Scarlet fever immunization is in its infancy and experimental stage. Much work must be done in scarlet fever immunization before it can be generally used.

Two of my cases are children in rural districts immunized on account of scattered cases. The third case was a child immunized for distinct contacts. I believe in contacts, that is, in contacts in the same house we have a very satisfactory prophylaxis of short duration. Out of twelve children given scarlet fever serum as prophylaxis only one developed scarlet fever. However, scarlet fever does not possess as high a degree of susceptibility as many of the other contagious diseases. Two of the cases to be reported were nephritis and one case was encephalitis.

A search through the literature gives scant reference to the harmful effect of scarlet fever serum. My cases were so distinct and followed so shortly after the use of the serum that there is no doubt in my mind that the serum was the direct cause. Michetin of Moscow in the A. M. A. observed the following symptoms following the use of scarlet fever vaccines in strong reactions. The children became drowsy, at times delirious, temperature 101-103, the eruption appears in dots not only around the parts of the injection but over the whole body, especially the neck and shoulders, throat red and inflamed, papilla of tongue enlarged, albumen in the urine. In 26 cases disquamation of the skin took place, neck, groins and palms. Two cases of nephritis were seen.

Tooney and others made studies to ascertain the reaction in immune and sensitive patients to large skin test doses. Twelve nurses given, a 4 plus reaction, and six nurses with negative reactions received intramuscularly 750 skin test doses. The six nurses with negative skin reaction had no reaction. Nine of the four plus had a generalized reaction after the use of the serum.

Thirty hours after the injection one nurse had a scarlet fever rash, next day two had a rash, and the remaining six had scarlatina forms of eruptions. In five the reaction was severe enough to make them go to bed for three or four days. The temperature ran as high as 104 in two instances. In six cases the reaction was as severe as any scarlet fever.

In encephalitis no case has appeared in literature to the best of my knowledge following the use of scarlet fever prophylaxis serum, although a number of cases of encephalitis have been reported following vaccination for small pox.

Comby of Paris reported three cases of encephalitis following the use of small pox vaccination, the initial symptom appearing twelve days after the child was vaccinated.

Bastiance, Biji and Terbraugh reported thirty-five cases of post vaccinal encephalitis following the vaccinaton for small pox. Of these twenty-three were fatal. The symptoms appeared 10-13 days after vaccination They concluded that post vac-

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cinal encephalitis was probably caused by an ultra virus latent in the patient which was activated by the vaccination.

The following cases were observed by me:

M. J., aged 8, admitted North Louisiana Sanatarium, on account of temperature and cervical adenitis. Four weeks previous to admission on account of scarlet fever scare the child was given a dose of scarlet fever prophylaxis serum. Three days later the child developed sore throat with marked enlargement of the glands of the neck, no eruption was observed by the mother. Physical examination showed enlargement of glands of neck, throat negative, chest negative, hematuria with marked decrease in the amount of urine. Urine examination showed R. B. C., albumen, casts. First examinations 7 per cent albumen, successive urine examinations showed the same findings with a gradual decrease in blood cells, albumen and casts until discharged. At this time only a trace of albumen was found. For the first three days the total amount of urine secreted was six ounces, following this there was rapid average to normal. One month later the urine was negative.

P. P., aged 8, male, on account of house contacts with sister and another child was given scarlet fever prophylaxis serum. Three days after the last dose of serum was given, scarlet fever vaccines were given. Three days later the following symptoms were observed: eruption of moderate degree on chest and back, part macular, part papular, throat red. Temperature lasted five days. Three weeks later the child had three attacks of vomiting, three nights in succession. The following morning showed generalized edema. Patient had three convulsions. At that time the child had complained of being unable to see. Urine was loaded with albumen and casts. Four months later urinalysis was negative for albumen. No blood chemistry was done in either of these cases.

M. M., aged 8, male, admitted to Schumpert Sanitarium on account of loss of consciousness and stupor. Four weeks previous to admission the child ran obscure temperature of one week's duration, not sufficient to keep him from school. Eleven days before admission the child received a dose of scarlet fever serum resulting in marked urticaria. On the eleventh day following the injection child lapsed into unconsciousness. Physical examination: pupils react to light, deep reflexes are exaggerated, superficial reflexes are normal. Koenig and Brudzinsky present, rigidity of neck, child very sensitive to touch, tonsils enlarged, eye, ear and throat negative, chest and abdomen negative. A diagnosis of meningitis was made. Blood count: R. B. C. 3,800,000, white count 11,200, Poly 76, L. L. 6 per cent, S. L. 17, eosinophiles 1 per cent, typhoid, para-typhoid and malaria; urine negative. 10-18-26 spinal fluid 30, globulin 0, T. B. smear negative, Wassermann negative. 10-20-26 cell count 40, globulin 1 plus, sugar 90 mgms, T. B. smear negative, colloidal gold 3555, 400,000 total, proteins 6-1 mgms. Progress: Patient was admitted in father's arms, restless, unable to take food by mouth, nasal feeding. September 18, patient became worse during the latter part of the night. September 19th, patient was much worse, with restlessnes, very weak pulse, distended abdomen. September 20th, spinal puncture, patient was somewhat improved. September 21, patient improving, drank water by mouth, first evidence of conscious action. September 22, much improved, patient was able to take food by mouth. September 24, child was resting very well, temperature normal, gradual improvement took place. September 31, child discharged, much improved. Highest temperature 102. After a complete study of this case our final diagnosis was encephalitis following scarlet fever prophylaxis injection. Nine months later the child still has some remains of the old encephalitis condition.

RECURRENT DUODENAL OBSTRUCTION*

J. A. DANNA, M. D.,†

NEW ORLEANS.

I am going to review tonight five cases of duodenal obstruction which were given surgical treatment, and, if possible, arouse an interest in the subject and perhaps get some real discussion. I saw my first case in 1921, and have been on the lookout for similar conditions ever since. I am sorry to have to say that I have had difficulty in interesting the radiologists and that I had no assistance from them until very recently. Much has been written on the subject in the last few years and the condition has been called by various names: duodenal dilatation, duodenal ileus, duodenal obstruction. Owing to the tendency of the symptoms to recur, in a large majority of the cases, between periods of comparative well-being, I have called it recurrent duodenal obstruction.

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I was quite impressed while at the Mayo Clinic a few days ago by a paper read by Dr. Wilkie, Professor of Surgery of the University of Edinburgh, who had seen seventy-five cases. He saw his first case at autopsy in a patient dying of ruptured duodenal ulcer. I wondered at the time whether the ulcer was not the result of the dilatation and obstruction and whether gastro-enterostomy in such a case would not be sure to produce the clinical picture which has aptly been called vicious circle; or whether most of the cases of so-called vicious circle, occurring after gastro-enterostomy, are not due to obstruction in the distal duodenum. There will be a symposium on this subject at the meeting of the Radiological Society at Milwaukee next week. I hope that many of our radiologists will be able to attend. Suggestion has been made by Crile and his co-workers that migraine is produced by duodenal obstruction. Most of my cases had headaches. As to the pathology, I believe that there are various types of the condition, some being inflammatory; some due to congenital abnormalities, etc., but I am not going to discuss this phase of the subject. With the aid of some slides, I will endeavor to discuss my cases.

Case No. 1. G. S., aged 21, referred to me by Dr. Levin, who had been treating him for some time without relief. For five years, he had been having acute epigastric pains of severe character, lasting from a few minutes to several hours, coming on at irregular intervals (only while at work) and recently almost daily. He had served in the army overseas where he had a tonsillectomy done on him and had been treated as various kinds of a "neuro" and finally discharged. He had never been able to convince the army surgeons that there was anything really the matter with him. He was a nervous wreck; tall and thin in stature; had no vomiting nor headaches. He was operated April 1, 1921, with the idea of doing an appendectomy on him and making exploration. Examination revealed normal appendix, stomach and gall bladder. First portion of the duodenum was quite large and thick-walled. On raising the colon and omentum, the third portion of the duodenum could be seen presenting in the posterior abdominal wall in several large coils. This was freed and straightened out. Where the duodenum passed under the mesenteric vessels, it seemed to be constricted. Its surroundings were stretched at this point and the bowel itself freed so as to be able to pull it through into the general cavity. This straightened out the coiled portion of the duodenum and it was kept from returning to its original position by several sutures at the duodeno-jejunal junction to the surrounding peritoneal surfaces. The result was quite magical and for eight months he had no further pain. I lost track of him shortly before he began to have pain again and did not see him until a few days ago when I was able to locate him. Instead of a poorly dressed, unkempt, dejected individual, we saw a clean-cut, slicked well dressed young man of gentlemanly bearing who had gained considerably in weight, was married and had a very good job. He says that he has had pain off and on since but never found it necessary to seek medical aid and could not be persuaded to return for treatment.

Case No. 2. L. R., aged 18. Tall, thin; otherwise normal. Seven months before he had femoral hernia operation and appendectomy for a pain to the right of the umbilicus, aggravated by activity, coughing, etc., which prevented him from playing football and finally forced him to give up college. No vomiting; frequent headaches. Operated November 20, 1922. Having in mind the finding in Case No. 1, exploration revealed the same condition and a similar operation was done. Result—complete relief to date. He was seen today.

Case No. 3. Miss K. F., aged 23. Small, thin girl. Complaining for several years of upper right abdominal pain lasting from one hour to three days with headaches and coming on at irregular intervals. She was comparatively well between attacks except for a little soreness in the right side. Was afraid to eat for fear of bringing on an attack. Occasionally suffered with hemorrhoids and had an appendectomy one year before. March 10, 1926—Operation revealed a condition not quite so marked as in the two previous cases. Fearing the uncertainty of a relief of the obstruction by the technique previously followed, it was thought preferable to do an anastomosis between the presenting coil of the duodenum and that portion of the beginning of the jejunum, which could be easily brought across and in contact with it. A lateral anastomosis with the Murphy button was done. The button was not passed and although she ate everything without pain and had no attack similar to those she had been having before, she had a definite soreness over the site of operation. Four months later the abdomen was re-opened and the button pulled loose by digital manipulation. It was passed the following day. She still has complete relief of her spells; still has some soreness.

Case No. 4. S. M., aged 29, graduate nurse. Sick three years; no pain; always vomited supper; often vomiting dinner and rarely breakfast. Ambitious to work; much depressed. Recently ate breakfast only. Had frequent severe headaches. Previous operation none. March 17, 1926, operated. First portion of duodenum definitely enlarged; in fact, the duodenum beyond the pylorus seemed as large as the stomach above the pylorus. There seemed to be no constriction by the root of the superior mesentery artery. The duodenum presented posteriorly as one large loop. Murphy Button anastomosis. Complete relief to date.

Case No. 5. T. S., aged 24. Tall, thin, stooped. Quite depressed. Had been sick for three years, with severe attacks of epigastric and right upper abdominal pain, lasting one hour to three days, with severe headaches. Relieved by vomiting; well in intervals between attacks. Increasing frequency of spells to from two to three a week. Ate nothing during spells. Previous operations none. Operated October 22, 1926. Duodeno-jejunostomy; two rows of gastroenterostomy catgut being used. Relief so far. Operated October 22, 1927—just one month ago.

I believe in these cases that duodeno-jejunostomy should be done, as freeing the duodenum alone might or might not relieve the symptoms. I do not believe I will use the button again. I think the suture method is preferable.

In conclusion: I believe that there are many patients suffering with recurrent duodenal obstruction of a complete or incomplete nature, causing varying symptoms. As the number of our cases increases, I believe we will be able to classify them as two, three or four definite clinical pictures. These cases can be relieved by the proper operative procedure, preferably by duodeno-jejunostomy with the suture method. While doing an abdominal exploration, the operation is not complete until you raise the colon and look at the third portion of the duodenum and see if it does not need attention.

(Further details covering the surgical procedure in each of the above cases were here given by Dr. Danna, elucidating with illustrations of the duodenum and surrounding structures.) (Slides Nos. 6 and 7.)

DISCUSSION.

Dr. A. L. Levin (New Orleans): Dr. Danna deserves credit for bringing before us tonight this important subject of recurrent duodenal obstruction. I am very much interested in this subject. For the past several years I have made observations on cases with disturbances of the gastro-intestinal tract in which roentgen-ray demonstrates definite duodenal dilatation. I read a paper on this subject before the society in 1923, which was published in the New Orleans Medical and Surgical Journal. The first case which Dr. Danna reports has been under my observation for a number of years. No definite diagnosis was made. The reason for not arriving at a definite diagnosis was probably due to the fact that the radiologist then did not pay attention to duodenal dilatation as he does now since his attention has been called to its existence. In looking up the literature on the subject we find cases reported in 1920, 1921, 1922 and 1923. Dr. Danna diagnosed his case as duodenal obstruction. He must have had definite, good reasons, from his standpoint, to believe that there was an obstruction. My observations on numerous occasions, fluoroscopically and radiographically, lead me to believe that two duodenal conditions exist; one a duodenal obstruction and the other, which is more common, simply a duodenal dilatation, slight or marked. I recollect very well several cases who came to operation in which no duodenal obstruction was found, and in which preoperatively the roentgen-ray demonstrated a definite large duodenal dilatation with symptoms of obstruction such as duodenal regurgitation, pain, nausea, etc.

Some of you probably remember the case of colonic obstruction with fecaliths with a definite duodenal dilatation, reported by me several years ago, but no obstruction was found by the surgeon. Another case I remember which came under my observation in my clinic at Touro Infirmary was one in which the roentgen-ray demonstrated duodenal dilatation, still the surgeon could not find a duodenal obstruction. The causative factors of duodenal dilatation are numerous. I have enumerated them in my paper on that subject. I simply wish to mention tonight a point which might be of interest. From what I can gather in the literature on the subject, there are two types of duodenal dilatation: one a permanent, the other a transient. The transient may be caused by a loose right colon, to which the surgeon should pay particular attention, or a gastroptosis and splanchnoptosis. This abdominal condition unquestionably causes a drag and duodenal kink, which results in dilatation. In such cases, the surgeon on opening the abdomen should correct such an abnormality by fixation. Post operative vomiting, I believe, is more often due to a duodenal dilatation as a result of an obstruction by a kink than by gastric dilatation, as it is commonly diagnosed.

Duodenal ulcer, malignancy of the jejunum (several cases reported), malignancy of the head

of the pancreas are causes of duodenal dilatation. Duodenal dilatation, in my opinion, is more common than duodenal obstruction, and it results in toxemia. It is not often recognizable unless a careful roentgen-ray is made. It can be plainly seen fluoroscopically as well as radiographically. The symptomatology in these cases varies. Some present a typical picture of duodenal ulcer; others will present a group of symptoms pointing to biliary toxemia with headaches of a migrainous nature. The gastric analysis varies from a hyperchlorhydria to an achylia. The stomach itself is often found to be hypotonic or there is a marked gastric atony. To differentiate between a duodenal obstruction and a mere duodenal dilatation is not so easy unless carefully studied with the aid of the fluoroscope. It is often quite difficult to differentiate between a duodenal ulcer causing an obstruction and the duodenal diverticulum, but as a rule the duodenal ulcer is found on the lesser curvature whereas a diverticulum or pouch is more common on the greater curvature.

As far as the treatment of these cases is concerned, Kocher speaks very discouragingly. In cases of obstruction he cites four cases with poor results following operation. In cases of long standing they cannot stand much operative procedure because they are highly toxic. Duodenal dilatation can be handled medically sometimes by regulation of diet; smaller meals but more frequent; duodenal intubation and duodenal irrigations; regulation of bowel movement; in this way often satisfactory results can be obtained.

I wish to reiterate that this subject is of great importance. We should pay more attention to it, and I trust some day somebody will be good enough to write a text book on duodenal dilatation and obstruction.

Roentenograms, pre- and post-operative studies of Dr. Danna's cases, demonstrated by Dr. L. A. Fortier (New Orleans):

Case 1. This film was taken after operation. I did not see him previous to his operation—the roentgen-ray was done at some other place. It shows a definite dilatation of the second portion of the duodenum, which you might mistake for the pylorus, but it is not. Under the fluoroscope I saw this definitely separated from the stomach altogether, it being the second portion of the duodenum markedly dilated. This is the case Dr. Danna spoke of straightening the duodenum by pulling the loops thru. There is evidence of a recurrence of his trouble.

Cases 2 and 3. No pathology of the duodenum is revealed. In making the roentgen-ray examinations we searched carefully for this, but could find no evidence of pathology in the duodenum.

Case 4. Under the fluoroscope these are more pronounced than the films. You get a magnification, which makes the fluoroscopic examination more valuable than the film. Here you see a slight dilatation of the first portion of the duodenem, this being the second portion and here the pylorus. This patient had a typical history of migraine and pain in the midline of the abdomen.

Case 5. I think you can all see the dilatation of the second portion of the duodenum running into the third.

Now you see five cases here in which two showed absolutely a normal duodenum. It is not always easy for anyone doing roentgen-ray work to demonstrate all duodenal pathology. If we see it, we state it, if we do not, we cannot say it is there.

It was with some trepidation that I saw Dr. Danna do this anastomosis. Some of these cases came back perfectly well. This patient came back several times to see whether the button had been moved from its point of insertion; she had been relieved of all her symptoms.

Case 1 is the most marked case of all. By the way, he said that he did not want to pay for the examination because Dr. Danna was experimenting on him.

Dr. Chaille Jamison (New Orleans): I thought I had seen only one of these cases. The first I did not recognize. The second case, however, has not been operated on. This patient came to me, a young lady (medical student) with a syndrome similar to the one described by Dr. Danna. The attacks of pain that she has, come on at very rare intervals—they do not come on now. She has been wearing a corset for several years. She has symptoms that might suggest duodenal ulcer. I did not pay much attention to the syndrome. I had Dr. Fortier roentgen-ray her. The picture shows a very striking condition; instead of the duodenum coming down in a crescent, it comes down in practically two loops, with very marked dilatation.

I am simply going to observe this patient, not going to advise operation at the present time and do not think she is going to consider operation.

One last point: do not let us forget that everything in the whole category of medicine has been blamed (either through ignorance or the specialist's limited vision) for migraine. The gynecologist is inclined to trace it to a gynecological condition, the ophthalmologist to the eye, the ear nose and throat men to the nose or throat, and if we read endocrinology at all, we have to believe it is due to some disturbance of the internal glandular secretions. Now we say it is from the

duodenum. Let us not blame the duodenum for the migraine—I protest over that.

Dr. Randolph Lyons (New Orleans): I am not a surgeon, but the subject is interesting and it seems to me that the medical man as well as the surgeon is seeing this particular condition. I have had the ill, or good fortune to see three cases in the last year and a half, but will not go into the pathology or etiology—some might be congenital, others are due to obstruction either from adhesions or pulling down on the duodenum and in some cases there is apparently no cause we can find for the condition, nor does the roentgen-ray always reveal the reason. It is, however, an entity and gives evidence of definite symptomatology.

Crile, as Dr. Levin has stated, has reported the frequency of migraine in this condition. The first case I saw was in a young married woman who has had a cholecystectomy, the duodenum was very large, patient in a very bad condition when operated upon and died shortly afterward.

The second case was a woman about fifty-five. Her father and mother both died of abdominal cancer; one brother, dead, also had had it. She began to develop stomach symptoms; regurgitation, emesis, and the physician who had been attending her thought he could palpate a mass. He probably did. Anyway, when he operated on her he asked me to be present at the operation. Exploration for malignancy was performed and a very thorough examination revealed no pathology whatsoever. Nothing was done except to close the operative wound. She felt well for several months, then developed symptoms of migraine and emesis, vomiting practically everything she ate. She came to me for examination and we made some roentgen-ray pictures and examined the gastric contents: contents showed hyperacidity, the roentgen-ray an interesting condition. Under the fluoroscope you could see the food go through the pylorus, fill up the duodenum and regurgitate. We put a Jutte tube through the pylorus into the duodenum and filled it up with barium—it would regurgitate back through the pylorus. I advised the doctor to do another operation; so he did. I have never seen such a mass of adhesions. Nothing was done except palpate very gently and feel the organs; the adhesions were so dense we could not do anything, merely make a gastro-enterostomy. She is considerably better, has gained weight and manages to get along.

The third case is now being observed. She complains of headaches, almost constant, worse in the afternoon, and has lost a little weight. She is thirty-five years old. Examination of gastric contents shows slight hyperchlorhydria. Radiological study reveals a dilated duodenum in the first and second portions and there seems to be regurgitation of the barium meal. I have not had her operated on, but want to watch her. We cannot find evidence of obstruction or adhesions, but eventually she may have to go through the hands of the surgeon.

Dr. J. A. Danna (closing): As to dilatation without obstruction, what would cause a dilatation in the intestinal tract anywhere except obstruction? We speak of migraine due to biliary toxemia—there is no more certain way of getting biliary toxemia than by obstructing the duodenum. In some of the cases the amount of the dilatation of the first portion of the duodenum is more evident than in others. In this boy (Case 5) as the structures lay exposed in the abdomen, his duodenum was larger than that portion of the stomach nearest to it—in other words, the part distal to the pylorus was larger than that proximal to it.

I am glad to see Dr. Lyons and Dr. Jamison awake to the duodenal dilatation or obstruction question and appreciate very much their remarks. Of course, visceroptosis, I am sure, was responsible for some of these symptoms. As I said, we will probably be able to classify them in three or four classes after further study.

Guard against one thing: Do not operate on every case in which the roentgen-ray shows a redundancy or dilatation of the duodenum when there are no symptoms. If you have a case that does give you symptoms and you find roentgen-ray verification, operate. If you get a case where you have symptoms and the roentgen-ray shows nothing—operate.

THE CELEBRATION OF AN OLD MEDICAL JOURNAL—On Saturday, February 18th, the Staff of the Boston Medical and Surgical Journal celebrated the one hundredth anniversary of the first issue of this well known journal. One hundred years of continuous publication makes the Boston Medical and Surgical Journal one of the oldest medical journals in the United States, and in fact in the world. It was only a few years ago that the London Lancet celebrated its centennial, and two years before them the American Journal of Medical Science, which is the oldest medical journal published in the English language, and probably the oldest in the world from the point of view of continuous publication.

THE SPANISH EDITION OF THE UNITED STATES PHARMACOPEIA—It may interest the physicians of Spanish descent and those speaking Spanish to know that the 10th edition of the United States Pharmacopeia has been published in Spanish. Translation has been made by a Committee from the University of Havana.

FACTORS OF SAFETY IN SURGERY OF THE BILIARY TRACT.*

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There are certain general risks incident to all surgery. We may go further in the analysis and say that certain factors of risk cannot be eliminated, yet with proper care may be made less; certain risks may be eliminated in their entirety by proper care; and in a minority of cases, the tragedies of surgery, we are not able to foresee the risk nor able to influence its course once it develops. In addition to these broad dangers common to all surgery, there are certain other factors of risk dependent upon and peculiar to surgery of the different organs and fields.

In all surgery, the question of reducing hemorrhage, minimizing shock and preventing infection must be considered. In years gone by these factors accounted probably for the majority of the cases of mortality; today they account for a minority . I do not wish to discuss these three conditions in detail, except as they apply particularly to surgery of the biliary tract.

Hemorrhage, occurring in the course of most operations, unquestionably can be controlled provided the operator proceeds in the proper frame of mind; yet no matter what one's poise or surgical dexterity may be, in surgery of the biliary tract, under certain conditions, unless due regard be paid to definite features of the pre-operative preparation, there will come inevitably unnecessary mortality

Obstruction to the biliary flow results in back pressure with re-absorption of the bile into the circulation and obstructive jaundice, either clinical or latent. There follows prolonged coagulation and bleeding time with pronounced tendency to hemorrhage. It is of importance that one recognize the fact that clinical jaundice need not be present before the coagulation time is influenced, for a latent jaundice may easily exist without evidence of the condition from urinalysis or pigmentation of the skin, and yet surgery performed on a patient at that time is of necessity hazardous.

It is here that the van den Bergh reaction has its great field of usefulness. In recent years the liver has been subjected to an enormous amount of study, various tests have been developed and of these the van den Bergh appears possibly of most value. Van den Bergh found that pure bilirubin in a solution of 0.7 milligrams per liter gave a positive reaction, and that other substances such as biliverdin did not. In discussing this reaction it may be of some assistance briefly to run over the theory of bilirubin formation and excretion. There is in the body a constant destruction of red blood cells, bilirubin thereby being formed by the cells of the reticulo-endothelial system. The bilirubin thus formed presumably is present in combination in the blood stream. As the blood passes through the liver, the polygonal cells extract the bilirubin and excrete it into the bile canaliculi. If for any reason the bile flow is obstructed, this pigment passes again into the blood stream, thus presenting a case of obstructive jaundice. In this condition there will be present a positive direct van den Bergh test. In the hemolytic type of jaundice there will be present an indirect van den Bergh reaction. The latter type is determined by a different type of examination. It is of no interest to us to consider in detail the technical features of this examination; suffice it to say that by this method one may determine exactly qualitatively and quantitatively the serum bilirubin content of the blood. And further, that one may determine from examination of this sort whether a patient has an obstructive jaundice or a hemolytic jaundice; and further, whether it is or is not safe at this time to operate. It is easily possible and actually does occur, that not unusually patients have a so-called "latent jaundice" without clinical manifestation,

*Read before the Mississippi State Medical Association, Jackson, May 10-12, 1927.

and yet at this time surgery is hazardous, and often may be complicated by hemorrhage, unnecessary in the first place and not infrequently uncontrollable.

Further examination of the bilirubin will show the optimal time for surgical intervention. If the serum bilirubin is increasing, there will be imminent danger from surgery. If it is decreasing, it is wise to wait until it has reached its lowest level.

As a general principle, any individual on the "down grade" is better not subjected to surgery. Every intelligent effort should first be made to arrest the progress of the condition, converting the loss to gain prior to operating. The majority of patients going down hill will die if operated upon, the majority of those operated upon while improving will recover.

Walters advises preparing jaundiced patients for surgery by the injection of 5 cc. of 10 per cent solution of calcium chlorid intravenously once a day for three days. So much for guarding against hemorrhage, the result of jaundice.

In removing the gall bladder one should endeavor to have the cystic artery under perfect control. Should this vessel escape, blind clamping may easily result in damage of the duct, thus producing a condition enormously difficult to repair. Repair of strictures of the bile duct, etc., are probably technically as difficult and dangerous as any operation in surgery.

To sum up: no jaundiced patient should be operated upon until thorough investigation of the general condition, and particularly estimation of the serum bilirubin, has been done. Preparation for surgery of the biliary tract should consist usually of rest, forced fluids and free elimination, the administration of glucose, by the intravenous route as a rule, and calcium chlorid in the vein. The latter, of course, is not necessary unless the patient has a prolonged coagulation time.

As a general principle, cholecystectomy should not be done on a deeply jaundiced patient, but rather drainage of the bladder with subsequent removal if required. If it is removed at the first operation, prolonged drainage of the common duct is essential.

Shock is guarded against in surgery of the biliary tract in about the same manner as in surgery of other fields. Crile has shown the profound effect of lowering the hepatic temperature, and has suggested the use of diathermy both before, during and after operation. It is a well known biophysical law that a change of one degree, in temperature changes the chemical activity of either a physical or biological system 10 per cent. Therefore if the temperature of the liver is reduced one degree its chemical activity is reduced 10 per cent. If the liver already has been impaired as a result of disease, any further reduction of function is likely to be serious and may account for mortality.

Crile found that when the abdomen was opened, even if the liver was not directly exposed, its temperature fell from one and one-half to three degrees or more, and the impairment of the organism as a whole as a result of this lowered liver temperature was indicated by the fact that the temperature of the brain also fell from one to three degrees. He advocates therefore the application of heat to the liver as a means of conserving the function of that organ. He has found that diathermy may be used and that it is effective.

My personal experience with this procedure has been limited to a small number of quite desperate cases and I have felt confident that strikingly beneficial results were attained. I account Crile's suggestion in this instance a definite contribution to surgery.

It has been my practice in very poor risks to employ local anesthesia, feeling that this form of anesthesia carries definitely less risk than general. In the hands of the inexpert it is naturally more trouble

and requires possibly more time, yet neither of these factors can be used as an argument against the method, but rather as a criticism of the surgeon.

It is my feeling that after cholecystectomy it is safer to drain. I am cognizant of the fact that the modern tendency is not to drain, yet it is acknowledged by most surgeons who do not employ drainage that occasionally they have mortality as a direct result of this practice. I cannot see where a small drain properly placed could do very much harm. It may be that after removing a gall bladder, in which there is little infection, and at the termination of the operation a perfectly dry field, it is perfectly safe not to drain. However, the majority of my cases do not fulfill these requirements and I invariably drain.

An acutely inflamed gall bladder, I believe, is best not subjected to surgery, provided the response to treatment as outlined above in the preparation of biliary cases for surgery is satisfactory. In the event surgery becomes imperative, cholecystostomy is preferable to removal in a majority of cases. Future cholecystectomy likely will be necessary, but I believe that in a large series of cases, particularly in the hands of the average surgeon, more patients will live and fewer patients will remain alive to wish that they were dead.

The common and hepatic ducts should be invaded if definite indication exists for their invasion and not otherwise.

Enlargement of the common duct indicates obstruction and the obstruction should be removed if feasible. In other words if there exists evidence of ductal disease, the duct must be opened, explored and dealt with as indicated; otherwise the duct should be let alone. The forming of strictures may result from invasion of the duct and present the most difficult problem to deal with. I believe that any duct that has been opened should be drained.

The pulmonary complication most often causing death is pneumonia. This complication probably occurs more often in the obese type of patients. It should be guarded against in surgery of the biliary tract in a similar fashion to surgery of other fields. Possibly here too the use of diathermy might be indicated. Obese patients ought not to have weight rapidly reduced just prior to surgery.

Complications of the kidney may occur in any type of surgery. They are not particularly more prone to occur in surgery of this field than in surgery or other regions. They should be guarded against and, should they develop, be treated in similar fashion.

The occurrence of emboli represents one of the tragedies of surgery. I know of no way in which they can be foreseen, there is little that can be done should they develop and the fate here rests largely in the hands of the gods.

In closing one might ask: is the mortality usually had in surgery of this type sufficiently high to demand such extensive conservatism as I have recommended? I imagine that on many occasions individuals about to undergo surgery for relief of a diseased gall bladder or, what is more apt to be the case, a sick biliary apparatus, have been blandly informed by the surgeon that there was no particular risk or very slight risk.

Willis states that in the five year period, 1901 to 1905, the number of deaths per hundred thousand from gall stones was 2.2 per cent. The succeeding year, it rose steadily, until in 1922, the last year for which figures were available, it showed an increase of 77 per cent.

Bernheim calls attention to some interesting facts. He says the operative deaths in the goitre clinic of Crile of Cleveland are not more than 1 per cent. The deaths following operations upon the gall bladder and common duct at the Mayo Clinic in 1923 were 5.6 per cent. Judd, in reviewing the mortality following operations for cholecystitis performed at the Mayo Clinic

in 1924, reported as follows: Acute cholecystitis with or without stones 36, mortality 5.59 per cent. Chronic cholecystitis with or without stones 861 cases, mortality 1.6 per cent. There were four deaths from cholecystostomy there, deaths being due to the following conditions: (1) acute nephritis, (2) hemorrhage, (3) pneumonia, (4) fat necrosis. There were 12 deaths from cholecystectomy. The causes of death in these cases were as follows: (1) unknown, 1. (2) cardiac, 2. (3) peritonitis 2. (4) hemorrhage, 2. (5) pulmonary embolus, 2. (6) bronchial-pneumonia, 2. (7) uremia, 1.

Gelpi made a study of the gall bladder cases operated upon in all services at the Charity Hospital of New Orleans, from the years 1914 through 1925. He found that cholecystectomy was done 296 times with a mortality of 16.21 per cent. Cholecystostomy was done 180 times with practically the same mortality, 16.11 per cent. There were 76 cases classed as acute cholecystitis and of these 20 died, making a mortality rate of 25.51 per cent. There were 398 chronic cases of which 57 died, making mortality of 14.32 per cent. Of the total cases operated upon, 77 died; so that including all cases both of removal and drainage, etc., there was a mortality of 16.17 per cent. In what I take to have been his personal series, consisting of 73 consecutive cases, the mortality for cholecystectomy was 5.45 per cent, and for cholecystostomy 27 per cent. The cases classed as acute showed a mortality of 12.5 per cent. The gross mortality for all cases irrespective of the type of operation was 10.95 per cent. The chief causes of death noted in the causes of mortality were shock, post-operative hemorrhage, sepsis, myocarditis, diffuse peritonitis and acute nephritis. In one or two cases multiple operations have been done and the per centage of mortality in these cases was high.

The above statistics are based upon work done by men of considerable experience. It is hardly reasonable to presume that men of ordinary experience could attain mortality rates even as low as those that I have quoted.

In conclusion I wish to emphasize certain facts. It seems to have become the case that both physicians and members of the laity have crowned surgery with some laurels that it is not entitled to wear. Knowledge of diseases of the liver and its allied organs in the past year has increased enormously. The technic of operative work in this field has advanced in like fashion. Yet I do not believe that the mortality had in surgery of this region is sufficiently low ever to justify one minimizing its risk to a prospective case. When we reflect that some of the ablest surgeons that adorn not only this country but the entire world report mortality rates as high as they do report them, we must admit that the average mortality rate is very likely far higher. That, gentlemen, represents the excuse for this paper. I realize that nothing original has been presented, what I have had to say simply represents the thought of men of large experience, and of course represents those things that I have personally found of value. Our ultimate aim is always the preservation of life, after that the lowering of the period of morbidity, the establishment of greater comfort, etc., follows.

I do believe that surgery of the biliary tract should not be undertaken except with due regard to its dangers, its trials and tribulations, as well as its successes. And I feel confident that no man, no matter how competent an operator he may be, has the right to do work of this character until the prospective case has been thoroughly examined, use made of the modern laboratory aids and due thought given to the question of mortality, for after all is said and done what profiteth it a man to lose his gall bladder, though it may be the seat of disease, if the price he must pay is his life?

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DISCUSSION.

Dr. V. B. Philpot (Houston): I just want to emphasize one or two points that Dr. Parsons mentioned in the paper. The first is the administration of glucose in these cases. Remembering that one of the functions of the liver is glycogenic and that naturally the function of the liver is impaired from a diseased gall bladder or any diseased function about the liver, we can readily see that the administration of glucose will be in order. It has been shown at the Mayo Clinic, that dogs with the liver removed will live only a short while (I think only a few hours) unless glucose is administered, in which event they will live for from one to two or three days.

Another point is the prevention of shock. As Dr. Parsons stated, Dr. Crile uses diathermy. I have never used diathermy, because I think more of ethylene as a general anesthetic than I do of ether, and I believe it would be dangerous to use that around ethylene. I wrote Dr. Crile about this, and his physiotherapists stated they had not tried it in the presence of ethylene.

Dr. Whitman Rowland (Memphis, Tenn.): I have no intention of discussing this paper from the standpoint of the surgeon, but as an internist in a clinic where we see large numbers of gall-bladder cases it has fallen to my lot to see the cases pre-operatively and postoperatively; pre-operatively to prepare for operation and postoperatively to care for conditions which sometimes arise that are apparently not surgical. We have been studying clinically, over the past two years, the peculiar types of death that occur in gall-bladder disease, particularly following operation in these serious cases. I do not mean to say that we have a large number of deaths, but in indiscriminate cases sent for operation we of course have our share of bad risks.

Dr. Philpot mentioned hepatitis. We have been considering these cases pre- and postoperatively from the standpoint of liver function. There is a peculiar postoperative death in bad risk, long standing, gall-bladder disease that is hard to describe. We believe some of these deaths are due to alkalosis, and we think we have a biochemical basis to prove it. We have seen others die that died that type of death which simulates uremia closely, in which the patient has a peculiar type of mental orientation. If you ask him how he feels he is slow in his mental response. He looks as if renal insufficiency was the cause of the clinical picture. Yet the blood urea is not elevated, the creatinin is not elevated, the nonprotein nitrogen is not elevated, the total output of urine in twenty-four hours is satisfactory, and there is no apparent reason for his death. A very probable reason for such a death is hepatic insufficiency. Liver disease is a constant accompaniment of long standing gall-bladder disease. We know too little about liver function, but in the presence of liver disease we have a right to assume an impairment of liver function. This general decrease in liver function results in impairment of that important process of detoxication. Opening the abdomen with resultant cooling down of the liver, further impairs its function. Operative trauma and shock also play a role. Following operation the end products of metabolism, which ordinarily are detoxified, now sift through the liver with incomplete detoxication, resulting in a sort of continuous autogenous poisoning. It is possible this may be a cause of postoperative mortality in certain gall-bladder cases.

Dr. Parsons mentioned the various tests. There are two Van den Bergh reactions, the direct and indirect. The one qualitative and the other quantitative. We have found in some cases that the Van den Bergh test did not help us very much. We run the icterus index on many patients.

Dr. Parsons (closing): I have nothing in particular to add. Of course, I agree with Dr. Philpot as to the administration of glucose. It is very valuable as a postoperative measure, also. I have had no experience with ethylene and therefore can not add anything.

I do not believe the toxemia following operation on the biliary tract is alkalosis; I believe it is acidosis.

I appreciate the discussion very much.

PARANASAL SINUSITIS—ITS PREVENTION.*

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The prevention of paranasal sinusitis is the aim of modern sinuology. In order to accomplish this great service to mankind it will require a thorough understanding of the physiology of the sinuses and the cooperation of the general medical man. Simple suppurative sinusitis is the result of a failure on the part of the immunizing faculties of the body to overcome an infection of the upper respiratory tract. I will not consider in this paper catarrhal sinusities with or without polyps, traumatic sinusitis or that from extension of dental infections, nor sinusitis secondary to the granulomatous diseases or neoplasms.

The five most important factors in sinus disease are: (a) the virulence of the bacteria, (b) the immunity of the individual inoculated, (c) heredity, (d) diet and sunshine, (e) dental infection.

Bacterial virulence and selective action. This varies in each epidemic of upper respiratory infections. Likewise the tendency towards sinusitis varies in the different epidemics and at times the inflammation tends towards the formation of empyema.

Sinus disease became an entity after the first influenza epidemics of 1889 and 1892. The epidemic of 1918 was the starting of a majority of our cases. At one time it was thought that the influenza bacillus was the specific germ of sinus disease. This was due to the fact that it limits its activity to the epithelium and the underlying loose connective tissue of the upper and lower respiratory tracts, and was so commonly found in the sinus discharge of the cases studied during the nineties.

Immunity. Our immunity to upper respiratory infections is the result of a constant inoculation of the body by the bacteria of our environment. This is done by the lymphoid tissue of the nose and throat. If the infection is mild this lymphoid tissue can develop the immune bodies, but if it is virulent the neighboring glands are brought into play to protect the general system. The acute rhinitis of early Fall is often Nature's reaction to our first inoculation. When children are sent to school they acquire an introduction to a wider circle of bacteria and react by having an acute cold. The degree of the reaction is dependent on the child and we find that the more lymphoid tissue the child possesses, the greater will be the reaction. This reaction decreases as the child grows older because its lymphoid tissue is less responsive. In the infant we find that the greatest degree of reaction is in the adenoids and the glands of the pharyngeal wall (gland of Henle), while in the child the tonsils are the most active The sinuses serve, in a minor role, in this process of immunity, and if the tonsils and adenoids are removed they enter into a major role.

Heredity. A tendency towards sinus disease is often the fruit of the family tree. The frequency with which the children of parents suffering from sinus disease contract the disease early in life is a well known fact and irrespective of environment, diet or possible contagion, I believe that an inherited weakness towards the condition is a most important factor. This inheritance may be either direct or crossed, the latter being the more common. The sinuses of the child assume the same morphology as those of the parent or immediate antecedent whom it resembles in facial appearance, if the child and the parent have normally developed sinuses. This knowledge can be used to determine whether or not the child's sinuses are developing properly. We have rayed a number of parents with persistent infantile sinuses and have been unable to show that their offsprings have a prototype of these dwarfed sinuses and in our series we have had children with persistent infantile si-

*Read at annual meeting of the Issaquena-Sharkey-Warren Counties Medical Society, Vicksburg, Miss., December 13, 1927.

nuses resembling in facial appearance a parent with a mature set of sinuses.

Diet and Sunshine. Stucky has for years contended that the diet was one of the predisposing causes of sinus disease, and recently at the University of Iowa, Daniels and Dean have scientifically proven that diet is very important in the production of sinus disease. I have seen them raise white mice of the same litter, in the same cage and under the same conditions of exposure, but on different diets, and those on a poor vitamin diet would develop sinus disease. I was surprised to see the amount of purulent secretion within their sinuses when they were opened at autopsy. I have found that alcohol and sugar will upset the metabolism of a chronic sinus patient and precipitate an acute attack.

Sugar Tolerance. If a normal individual is given 100 grams of sugar his blood will show in half an hour its greatest concentration, which is as a rule 0.150 and by another hour will have reached the so called normal of 0.100; but if the same amount of glucose is given a sinus patient it will pass the concentration of 0.150, and will require more than an hour to return to its basic level. If a diabetic patient develops a suppurative sinusitis he will show a greater intolerance toward the glucose and in one of our diabetic patients with an acute frontal sinusitis his blood sugar rose to 0.700 on what we supposed was a low sugar diet. With this knowledge that sinus patients have a low sugar tolerance it is my practice to remove glucose from their diet and as they improve to allow of other "sweets" than sugar. Honey is the best tolerated of the "sweets."

The people who live out of the sunshine have more sinus infections than those more fortunate ones who store up in their bodies the activating rays of the sunshine. The nuns have the least resistance and the most chronic sinuses because of their lack of sunshine. The office and institutional worker, the nurse and teacher suffer from the same lack of sunshine.

Dental Infections. Infections suffered by the sinuses from extension are mostly from the teeth. This extension is usually from an active abscess on the root of a tooth which ruptures either spontaneously into the antrum or is spilled into the sinuses during the extraction of a tooth. We have had in our Clinic this year an unusually large number of dental cysts, and I have been impressed by the high percentage of these arising from the socket of a tooth long since removed. In turn chronic sinus disease will destroy teeth.

Prevention. The prevention of paranasal sinus disease requires that we carefully watch the children of sinus patients and at the earliest tendency towards the disease take active steps to protect them by a strict observance of all the rules. We cannot shield the child from all infections and have it carry on the game of life, but we can be on our guard, and when the child enters school watch it and sensibly handle its behavior. In like manner the diet of the child should be well balanced and high in vitamins and low in sugar. During the summer the individual, whether child or adult, should enjoy as much sunshine as possible as the rays are capable of being stored up in the body. Whenever the resistance becomes lowered during the winter months, the sunshine should be artificially supplied by substituting ultra violet radiation. The use of vaccines for colds will remove a heavy burden from the sinuses and distribute it throughout the body.

I purposely have refrained from mentioning surgery and in closing will say that only the surgery designed to improve the ventilation and drainage of the nose and its sinuses can be included under the head of prevention.

REVIEWS

SOME ASPECTS OF NEUROLOGICAL SURGERY*

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NEW ORLEANS

Neurologic surgery, like that of other branches, is old but ever new owing to progress and investigation. The Greeks and Egyptians practised craniotomy, and skulls on exhibit in Great Britain show evidence of craniotomy practiced hundreds of years before. These skulls have holes in them which experts consider to represent surgical results and they appear so to an inexpert eye. There is report of the savages in Africa practising craniotomy. However, neurologic surgery as we today consider it is practically an infant, albeit a lusty one. Harvey Cushing is at the present time very far removed from a doddering graybeard although he was the first in this country to limit his work to this field. He is the Dean of the neurologic surgeons of America and has contributed tremendous advances to diagnosis and technic. Long may he live!

Some may be inclined to ask "What has the neurologic surgeon to offer? How does he justify his existence?" While readily admitting comparisons are odious, one may still realize that they are very convenient for the purpose of comparing; and I take the privilege of comparing neurologic with general surgery. When neurologic surgery is mentioned, brain tumors are frequently first considered, and many associate neurologic surgery with brain tumors alone. Let us consider brain tumors in comparison with tumors of some other parts of the body as liver, lung, pancreas, stomach or rectum, not one of which is as delicate as the brain, or at least as highly specialized, yet the results of malignant growths in any of these situations are pretty much the same as those of malignancy of the brain. We might possibly except an early carcinoma of the stomach found in the course of an exploration and removed in its incipiency, but as a general rule when intraabdominal or intrathoracic malignancies are sufficiently advanced to give rise to symptoms they are influenced by surgery little, if any, more than are malignancies of the brain. In other words, palliative operations may be done which may relieve the patient of his most distressing symptoms and prolong life for varying periods of from a few months to a goodly number of years which is about what can be done with such conditions of the brain. "That" some one says "may be all very true but what about the mortality?" At the present time "there is the rub" for we are unable so readily to predicate the nature of an intracranial lesion as that of one in the chest or abdomen.

By roentgenologic and other laboratory methods of extreme refinement, by expert physical diagnosis through the application of auscultation, palpation and percussion much can be learned of the situation and nature of an intraabdominal or intrathoracic lesion and many such cases can be dismissed as inoperable. Until comparatively recent times the diagnostic methods applied to intracranial lesions were hardly sufficient to set aside the operable from the inoperable, but of late, as pointed out by Bailey, better surgical judgment leads to fewer operations for such lesions as those of the optic chiasm and the brain stem. There is also the most potent factor of increased intracranial pressure which might be safely stated to be one of the chief drawbacks to intracranial surgery, for unfortunately many of these cases have advanced to the phase of increased intracranial pressure before being sent to the surgeon. To await the presence of the classical triad of severe headaches, vomiting and choked discs is to await the onset of increased pressure and greatly to increase the risk and difficulty of the operation. One might risk

*Read before Baptist Hospital Staff, October 11, 1927.

saying that the results of surgery for brain tumors compare favorably with those for other such lesions which are as serious in nature and as completely disabling.

Percy Sargent[17] has recently reported the results of some four hundred cranial operations and found in cerebral gliomata about 25 per cent of the patients die shortly after operation, about 50 per cent within eight months and about 25 per cent make good recoveries, some living for years and earning their own livings.

Bailey and Cushing[5] and more recently Bailey[4] alone have contributed very valuable knowledge to the nature of cerebral neoplasms; through a long and painstaking study they have evolved a classification into which the vast majority of such growths will fall. They have divided these growths into fourteen classes and while there are, of course, borderline cases and some showing characteristics of more than one type, they can at least offer some suggestion as to the type of growth and therefore the prognosis. In a series of 407 cases they have found a survival period of some 12 months in the spongioblastoma multiforme and an increasing degree of longevity in the other types up to the astrocytoma in which the period is 76 plus months postoperative. They have found, furthermore, that growth in the spongioblastoma multiforme and the medulloblastoma can be definitely retarded by roentgen ray therapy which should be pushed to the limit in such cases. Also, in considering the question of operation in recurrences, certain benign types are apt to be associated with the filling of cysts, blockage of spinal circulation or other accessory factors. We call cerebral gliomata malignant because of their rapid growth and their tendency to infiltrate the neighboring tissue although they do not metastasise outside of the brain.

In the cerebellar gliomata Sargent[17] found 28 per cent alive and well at an average period of three years after operation and the average survival period of 72 per cent was 13 months. The benign tumors of the brain are unfortunately less common than the malignant; these tumors are benign from the histologic standpoint but certainly malignant enough from the standpoint of the patient as they will go on to a fatal termination if not interrupted. They are endotheliomata which do not actually invade the brain tissue but push it aside making hollows in which they rest. They are encapsulted and theoretically should be easily removed but this is far from being the case for, as Sargent[17] points out, the dura to which they are attached must be removed with them and this dura is nearly always close to one of the great venous sinuses. In Sargent's series the endotheliomata were to the gliomata as 2 is to 7. Of these, 75 per cent were completely removed and 50 per cent of the patients made good recoveries; 22 per cent with no neurologic defect whatever and 38 per cent with varying degrees of palsies or seizures.

The tumors arising in the cerebellopontine angle are largely neurofibromata, 90 per cent in Sargent's series. They are encapsulated and may be hard and firm, or soft from degeneration or even liquid in the center. The practice among many surgeons is to do an intracapsular enucleation by piecemeal rather than a removal of the tumor in its capsule, the latter being beset with difficulty in controlling hemorrhage and liable to interference with circulation of the medulla. In certain cases where there is a very large tumor in an elderly person or in one who is not a very good surgical risk one might insert radium needles directly into the tumor mass allowing them to remain for an appropriate time and later giving deep roentgen-ray therapy.

Operations on the pituitary body are usually undertaken to preserve vision and the location and extent of the tumor are factors determining the choice of approach. Cushing[6] has arrived at the remarkably low mortality of 4 per cent in these cases using either the trans-frontal or the transsphenoidal route. He considers it not im-

possible that the neurologic surgeon of the future will operate to arrest early acromegaly. The question arises as to how much of the pituitary body may be safely removed. The work of Smith[18] and Evans[10] of California is very interesting along this line. Among other things they found that the pituitary body may be removed from a rat after which growth and certain developmental factors are arrested. These functions can then be restored by a daily homoplastic implantation of fresh pituitary tissue, a procedure naturally not available for man. We do hope, however, that our diligent co-workers in the laboratory will some day give us an active, standardized preparation of the hormone or hormones of pituitary body.

For major neuralgia of the trifacial nerve the only sure and permanent cure is dividing the posterior root of the Gasserian ganglion which gives prompt and permanent relief from the pain. For the degree of suffering and disability involved there is probably no surgical procedure which shows a greater percentage of cure and a lower mortality. Prior to operation it is often advisable to inject the branches of the nerve with alcohol. In most cases relief will be obtained and this may last from a few weeks or months to several years; the average period of relief is about nine months. Injections can be repeated as indicated as long as they prove efficacious and in some cases may defer operation for years. This procedure accustoms the patient to the numbness of the face which must be accepted in lieu of the pain.

An analogous condition to tic douleroux is major neuralgia of the ninth nerve. The pain is much of the same nature in its intensity and other characteristics but occurs at the base of the tongue and along the lateral wall of the pharynx in the region of the tonsil often radiating to the ear on the same side. It has its "trigger zone" and may be brought on by talking, eating, drinking cold fluids etc. Painting the throat and base of the tongue with cocain will relieve the pain for a short time only. Here again permanent relief can be obtained only by dividing the ninth nerve, and in order that it may not regenerate it should be divided proximal to the ganglion which lies at or within the jugular foramen. Because of its anatomical relationships and situation the nerve does not lend itself to injection.

Tumors of the spinal cord and coverings present a more cheerful outlook, for whereas in the cranium the benign tumors are in the minority the situation is not such in the spine for here we encounter many nonmalignant growths producing their damage by mechanical pressure. According to Adson[3] about 65 per cent are situated extramedullary and are removable, being as a rule tumors of endothelial origin, while the intramedullary tumors are usually of glial origin. Woltman[22] reports about 60 per cent removable. About 66 per cent of the patients benefit from the operation. According to Church and Peterson[7] the extramedullary tumors are six times as common as the intramedullary, which would give the intramedullary an occurrence of less than 20 per cent. For these surgery can offer little more than a positive diagnosis and such benefit as may result from decompression which will probably be only palliative and temporary. Spinal tumors are more readily localized than those in the cranium and are more easily approached and removed with greater safety.

There are certain diagnostic points which suggest a differentiation between extra- and intramedullary tumors of the spinal cord, but to arrive at such a diagnosis with certainty and exactness is very difficult and one who regularly commits himself definitely may reasonably expect some surprises. Lipiodol is often of help in localizing spinal lesions, but in the majority of cases the level may be determined by physical examination. If it is desired to determine the lower level it may become necessary to use lipiodol or a spinal pneumogram.

The spinal puncture is of great value. Fluid drawn from a point below a subarachnoid block may be expected to be of a yellow color, from a pale lemon to a deep gold and will often coagulate after standing a few minutes. This phenomenon is known as Froin's loculation syndrome. Occasionally the fluid above the block may be yellow, perhaps from blood seeping through the block. Another test of supreme value in subarachnoid block is the Queckenstedt test or the response to jugular pressure. A needle in the subarachnoid space is connected with a manometer and the spinal fluid pressure ascertained, light pressure is then made over the jugular veins in the neck causing an increase in the intracranial pressure by interfering with the venous outflow. This increase in pressure is communicated to the spinal fluid which will rise in the manometer and promptly fall when the jugular pressure is removed. In complete block there will be no response and in partial block a slow response. The test is very reliable. A series of punctures above and below may localize the tumor both by the physical appearance of the fluid and the response to jugular pressure.

In the field of surgery on the sympathetic nervous system we face a host of problems and possibilities. The question of the influence of the sympathetic nervous system on the tonus of voluntary muscle has interested and baffled investigators since 1879 when Perroncito[15] first reported the finding of a system of nonmedullated accessory fibres and endplates in striated muscles. The question remained largely a laboratory problem until 1924 when the Australians Hunter[13] and Royle[16] thought they had succeeded in releasing spasticity in both the laboratory animal and the human subject by operation on the sympathetic system, their technic being a ramisection of the links between the sympathetic and the cerebrospinal systems. No one else has so far succeeded in reproducing their results either in the laboratory animal or the human subject and the results of such surgery have so far been rather disappointing. It may be however that the last word has not been spoken along this line as Kuntz and Kerper[14] of St. Louis report positive findings in their dogs. Adson[2] of Rochester, and Davis[3] and Kanavel of Chicago, have favorable results following abdominal sympathectomies for circulatory diseases of the extremities such as Buerger's, Reynaud's and erythromelalgia. In many cases freedom from pain in angina pectoris has followed operations on the cervical sympathetic with varying types of operative procedure. When we consider the tremendous number of conditions in the extremities which might be benefitted by a definite and permanent increase of blood supply to the part we begin to realize the possibilities of surgery on the sympathetic system.[1]

With nerve anastomoses we are all very familiar, and while it is true that the improvement following such operations is not always as much as could be desired, at the same time the number who do improve seem to justify the comparatively safe operative procedure wherever an indication seems to exist.

In fractures of the skull and other head injuries involving the brain the tendency seems to be more and more away from promiscuous operation. Dorman[9] and Weaver[19] have reported a very interesting study along this line from Atlanta and out of a series of 125 cases of all grades of injury they had a mortality of only 22 deaths. They divide their cases into eight classes according to the grade of injury and in class A put those cases with massive brain injury and exhaustion of medullary centers dying within a few hours of admission; of their 22 deaths 20 occurred in this class, although only three were operated upon. Of the 125 cases 37 received surgical treatment. The others were treated by the use of hypotonic salines as brought out by Weed and McKibben,[20] Foley and Putnam,[12] and Fay,[11] who showed the superiority of magnesium sulphate over sodium chlorid.

In spinal injuries the question of surgical interference sometimes presents a problem requiring the very nicest surgical judgment. The vertebrae may suffer a marked degree of displacement and produce a serious injury to the cord but show very little if any malalignment upon roentgen-ray examination owing to having sprung back into very good position due to the elasticity of the muscles and ligaments. If one is convinced that there has been a transverse shearing of the cord operation is not indicated; this may often be shown by the position of the vertebrae. On the other hand, if there is reason to believe that the cord is not severed but is compressed by either fragments of bone of hemorrhage, it should be decompressed. The presence or absence of a subarachnoid block as demonstrated by the Queckenstedt test is of great value in such cases.

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HOSPITAL AND LABORATORY—The investigation of all biological phenomena is attended with great difficulty. During the past century great progress has been made, yet it can not be held that the formulation of any laws or generalizations regarding biological phenomena has been comparable in significance with the discovery of the laws regarding gravitation, the conservation of matter or the laws of thermodynamics. The methods to be employed in the investigation of biological phenomena are in principle the same as those which have been so productive in investigation in other branches of science, the results of which have been to give man that marvelous control over the forces of nature, the blessings of which we enjoy but hardly appreciate. Man tried for a thousand years to learn about his environment solely by exercising his reasoning powers, and the result was the dark ages. But in the seventeenth century there was introduced into his armamentarium a new weapon, a new method, the method of experiment. Man began to observe, to think, to try. Before he had only thought. The past three hundred years may be set apart from all that preceded as the Age of Experiment. What is called the scientific method has almost banished darkness from the earth, has almost annihilated distance and has lengthened time.—Cole, R.: Science, 66:545, 1927.

CASE REPORTS AND CLINICAL SUGGESTIONS

BICHLORID OF MERCURY POISONING PER VAGINAM.*

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NEW ORLEANS.

The patient is a fairly well developed and nourished female, twenty-four years of age, who complains of pain and swelling of her "womb" following the introduction of a 7½ grain tablet of bichlorid of mercury, placed in the vagina for the purpose of counteracting a persistent leukorrhea.

Present illness: At about 11:30 a. m., September 15, the patient inserted a bichlorid of mercury tablet into her vagina. She states that the tablet immediately began to melt and soon disappeared. Shortly afterwards, approximately ten to fifteen minutes, she felt a very painful, burning sensation in the vagina and vulva, with swelling of these parts. Becoming alarmed she sought the services of a physician, who attempted unsuccessfully to inject egg albumen into the vagina. She was given a hypodermic presumably of morphin and returned to her home. Another physician was summoned, who attempted to give her a vaginal douche, but failed on account of the extreme pain that it caused. She was given another hypodermic of morphin and sent to the city.

When first seen at the hospital, the patient was obviously acutely ill, extremely nauseated, and vomiting small amounts of clear fluid at frequent intervals, and having diarrheal stools containing large numbers of blood clots.

She had been unable to void since 11:30 a. m. and when catheterized at 6:15 p. m. 500 c.c. of urine was withdrawn, the specimens being full of blood, blood clots and mucous membrane tissue.

Her past history is of no significance at this time, excepting possibly the fact that her leukorrhea dates from an operation performed in 1924.

Physical examination: Temperature 100, pulse 78, respiration 22. The patient has the appearance of being very acutely ill; the skin is pale, cold and dry. The head and neck are negative excepting for slight bleeding from the nose and gums and a grayish discoloration of the buccal mucous membrane. The heart is not enlarged, no murmurs, The lungs show normal respiratory sounds. The abdomen shows an old scar in the midline from a previous operation; there is tenderness over the left kidney posteriorly and some pain and tenderness over the lower abdomen. *Vaginal examination:* Reveals a rather marked inflammation and edema of the vulva, especially the right side. The urethral orifice is congested and edematous and the mucous membrane of the vagina is very pale and almost whitened in appearance, being extremely tender on palpation. Bimanual examination was not made owing to the extreme pain and fear of rupturing the vaginal wall. *Laboratory examination:* Oct. 9, Blood: erythrocytes 4,100,000; leukocytes 9,750,N64; Oct. 19, N. P. N. 40 mg. per 100 c.c., urea 20 mg. per 100 c.c., creatin 10 mg. per 100 c.c.; Nov. 22, N. P. N. 36 mg. per 100 c.c., creatin 18 mg. per 100 c.c.; Nov. 22, urea nitrogen 16 mg. per 100 c.c., N. P. nitrogen 32 mg. per 100 c.c., uric acid 3.2 mg. per 100 c.c., chlorids, quantity not sufficient, creatin, 10 mg. per 100 c.c., blood sugar 100 mg. per 100 c.c. *Urine:* (1) Oct. 15, Sp. Gr. 1010 negative clinically and microscopically; (2) Nov. 8, Sp. Gr. 1005 negative clinically and a few pus cells and red blood cells, renal function test (intramuscular) Oct. 17, 60 per cent, Oct. 22, 60 per cent, Nov. 7, 45 per cent, Nov. 10, 70 per cent.

Treatment: Treatment was begun immediately, sodium thiosulphate gr. xv was given intravenously and a solution of sodium bicarbonate as a douche, followed by a vaginal instillation of one ounce of sodium thiosulphate. The patient was placed on liquid diet, and sodium thiosulphate solution was applied to the vulva as a compress.

The following day, the patient was given 1000 c.c. of 10 per cent glucose solution with sodium thiosulphate gr. xv intravenously by drip. Liquid diet was continued and potassium permanganate solution 1-5000 was used as a douche. A mouth wash of sodium thiosulphate and water, equal parts, was employed to advantage, the treatment of the third day being a repetition of the day previous, another glucose infusion being given and an enema of sodium bicarbonate solution.

The remainder of the treatment was essentially the same. The sodium thiosulphate gr. xv was given intravenously three times a day, also in solution with equal parts of water as a mouth wash two or three times a day, in conjunction with a solution of magnesium sulphate as a compress to the vulva, more or less, continuously. Hydrogen peroxid was used occasionally as an enema, and a solution of potassium permangate 1-5000 as a daily douche.

Her diet for the first six days was liquid exclusively and that high in sugar content. Improvement in her local, mouth and general condition was followed by soft and full diet.

*Read before the Orleans Parish Medical Society, November 14, 1927.

But one hypodermic of morphin gr. 1/6 was given and that soon after her admission, and it was not necessary afterwards to resort to any analgesic.

Progress notes: Oct. 16 patient voided voluntarily, several times, passing as much as 400 c.c. at a time, with many blood clots and portions of mucous membrane tissue. Patient was given sodium bicarbonate enema and passed a large quantity of bloody mucus. Oct. 17 patient voided greenish colored urine in early morning, but this has since improved, the last two specimens being clear. The amount passed is satisfactory, approximately 1500 c.c. Oct. 18 she had slight chill at 12:10 noon, complaining of pains in joints when position is changed, urine still highly colored. Oct. 18 patient apparently menstruating, greenish brown material returned from douche and enema. Oct. 19 vulva swelling diminished, some nausea, urine stools still colored.

Oct. 20 patient improved, had a solid, green colored stool, vulva swelling greatly reduced. Oct. 21 passed normal colored stool, intake and output still satisfactory, 300 c.c. to 1900 c.c. Oct. 23 urine was still cloudy, improved greatly. Oct. 24 normal stool, douche returned clear; sloughing of parts of tissue surrounding salivary glands beneath the tongue with slight amount of bleeding. Oct. 26 soft liquid diet; mouth improved. Developed right bartholinitis, incised. Oct. 27 drain in Bartholin gland was removed. Oct. 28 condition good. Oct. 31 general condition good, soon ready for discharge. Nov. 11 discharged after a period of observation and local treatment. Her maximum temperature 100-2, pulse 102, respiration 24. Minimum temperature 97.3, pulse 66, respiration 18.

Examination prior to discharge: Fortunately the anticipated atresia of the vagina and vesico and recto-vaginal fistulae did not materialize. The edema of the vulva had entirely disappeared. There was still some slight swelling of the vaginal mucous membrane with several small granulating ulcers, chiefly in the vaginal vault and on the cervix.

Bladder and rectal function were normal and she was entirely free from pain.

DISCUSSION.

Dr. John F. Dicks (New Orleans): I would like to discuss this paper because in 1916 I had a case similar to that of Dr. LeDoux, the symptoms about the same, but perhaps not quite so severe. Mrs. J. W., a white female of thirty years, thinking she was pregnant because her menses did not appear after the usual interval had elapsed, put seven and a half grains of bichlorid of mercury into the vagina, followed by a douche of 500 c.c of water with a bulb syringe. In about half an hour after the injection she was seized with violent pains, cramp-like in character, and sent for me. The symptoms were vomiting, abdominal pain and rigidity. I administered one-fourth of a grain of morphin and irrigated the vagina. Her temperature was normal, pulse not over 100, but she appeared very sick. I began giving her egg albumin by mouth, and milk. In the first twenty-four hours there was complete retention of urine. Catheterization was employed. Nourishment was not retained and because of the persistent vomiting proctoclysis was instituted and a hypodermic given. On the second day 500 c.c. of a five per cent solution of glucose was given intravenously. Thirty ounces of urine were voided and the improvement was marked. She continued to progress and finally recovered.

That was in 1916. No blood chemistry was done in this case, but I would like to know what the findings would have been, for in Dr. LeDoux's case the thing which interests me most is the high retention of creatinin. In the literature we find cases on record with a very high urea nitrogen content; whether the bichlorid is taken by mouth or inserted into the vagina, it is practically the same. I am certain that a great many cases of this type of poisoning are handled by the profession of which they say nothing.

Dr. Lucien Landry has kindly given me permission to mention a case which he and Dr. Matas treated at Touro Infirmary some four or five years ago. One of the employees married and wishing to prevent conception placed two seven and a half grains of bichlorid of mercury tablets into the vagina. The symptoms were the same as in the case of Dr. LeDoux. Dr. Matas opened the gall-bladder and used the McArthur drip with the hope of promoting the more rapid absorption of fluid through the intestine, but in spite of all treatment she died.

Another case of bichlorid of mercury poisoning I noticed in the literature was reported by a Philadelphia physician, Dr. Outerbridge, who did a double decapsulation of the kidney. In these cases, no matter what the method employed, whether decapsulation of the kidney, infusion etc., the idea is to get the fluid to the patient.

Dr. LeDoux's paper is timely and clearly demonstrates that we should be careful in prescribing douches to our patients; tell them the indication for the douche and if a drug is recommended be sure to specify the amount to be used.

In looking over the literature I did not see a single case report where bichlorid of mercury poisoning had occurred under a doctor's directions; it was used either to prevent conception or produce an abortion. In no instance had the drug been recommended by a physician.

Dr. Adolph Jacobs: About three years ago, at Charity Hospital, I had a case of poisoning by

bichlorid of mercury. A woman of twenty-four years had introduced a tablet of bichlorid of mercury into the vagina to induce abortion. Shortly after inserting the tablet in the vagina she became acutely ill, her symptoms corresponding to those in the cases already cited, gastric disturbance and severe abdominal pain. When I examined her there was bleeding from the vagina, which was intensely inflamed. She complained of not voiding and on catheterization about a dram of bloody urine was obtained. The outcome in this instance was less fortunate—death on the ninth day.

I do not remember what the blood chemistry was in this case, but it strikes me that the creatinin, 18 mg. per 100 c.c., in Dr. LeDoux's case is extremely high. I cannot recall seeing, in any type of disease, such a high creatinin and the patient still living; the recovery is remarkable. My patient became greatly edematous, suffered with air hunger, but remained conscious to the end.

Dr. H. B. Alsobrook: I observed a case similar to the one reported. Last spring a woman took a vaginal douche in which she had put seven and a half grains of bichlorid of mercury. Four hours later she was admitted to the hospital. For the first four or five days she ran temperature 103° to 105°; and on the fourth day she aborted a three months fetus. The treatment was practically the same as that carried out by Dr. LeDoux, but she lost all of her hair, most of her teeth and last time I saw her she had partial atresia of the vagina.

Dr. J. Birney Guthrie: The thing that strikes one in this report is the comparatively slight evidence of retention manifested by the blood chemistry. We have a very remarkable report as to blood chemistry, with an enormous creatinin increase. I believe we would have seen a very different state of affairs had not Dr. LeDoux used sodium thiosulphate. We do not see the terrific involvements we should expect after such a dosage. We have almost a specific in sodium thiosulphate in mercurial poisoning.

Dr. LeDoux's case seems to have been perfectly managed. There is only one suggestion that I could make, and that is in regard to the question of hemorrhage. Hemorrhage occurring in these poisonings is an interesting phase. It indicates an involvement of the reticulo-endothelial system which we are just beginning to study, or rather have been studying for a quarter of a century, but only now a little twilight is dawning in regard to its proper function. So it would seem, if we had a case right now, that to study these hemorrhagic tendencies, study them from the standpoint of causation, would prove both interesting and instructive.

The discussion that has been brought out is exceedingly interesting and I regret that Dr. Dicks touched so very lightly on the subject of decapsulation of the kidney. I am old enough to remember when that operation was quite the fashion and as one of my neighbors here remarked, he "helped to save a life on more than one occasion by using that operation. It seems to be something of value come up out of the past, yet we ought to consider that there is a field for that particular thing in these kidney involvements, and maybe we can save a few cases thereby that would otherwise be lost.

Dr. A. F. Hebert: About eighteen months ago I was called to see a young lady who had introduced seven and a half grains of bichlorid of mercury into the vagina to prevent conception. I immediately took her to Touro and had the nurse give her a douche, and started giving sodium thiosulphate. Three hours later, to prevent anuria, she was given 300 c.c. of 30 per cent glucose solution intravenously. Improvement was steady and the sodium thiosulphate was continued.

The last time I examined her she had almost complete atresia of the vagina, sloughing had occurred while the patient was in the institution.

Dr. E. L. King: I remember seeing two cases in which, while I could not prove that they were really ill from bichlorid of mercury poisoning, all the evidence seemed to point that way. Both were cases of criminal abortion, both presented a picture of suppression of urine, both very high N. P. N. of the blood, and both women died with absolute suppression of urine. The only way I could account for these clinical pictures was that the midwives who were responsible for the abortions must have used some of this drug for sterilization of instruments and had not washed it off before using these instruments.

I think such cases should be reported as a protest against the sale of such terribly dangerous drugs.

From a therapeutic point of view, I feel that the chief virtue of a bichlorid of mercury douche is in the water used and the heat carried by that water. I believe that the medicated douche has little or no superiority over the plain hot water or saline douche. Consider the anatomy of the cervix or vagina. The vaginal mucosa consists of stratified epithelium without glands; the cervical mucosa has glands of the compound racemose type, opening into the endocervix; in other words, the orifices of the glands open in the cervical canal and do not open into the vagina except in a cervix with eversion. About all to expect from the douche is mechanical cleanliness by washing away the discharge and the benefit derived from the heat carried into the vagina by the hot water.

We teach our patients with pelvic inflammatory conditions to take the recumbent position—rest in bed. The rest in bed is responsible for 95 per cent of the improvement and the douches for the rest.

There seems to be no excuse for the use of any particular medicated douche except that by prescribling it you impress the patient with the importance of continuing the treatment, but as far as any real effect from the medication, this is not as a rule to be expected. Bichlorid of mercury, of all the commonly employed antiseptics, is particularly slow in its action. It requires about 24 hours of continuous contact for this drug to kill the usual micro-organisms. Therefore, it is of little or no value as a gynecological agent, and, as the paper shows, its use is by no means free from danger.

Dr. Lucien A. LeDoux (closing): I want to thank those who have discussed this case report.

I wish to call attention to two very interesting facts: one, the absence of any renal injury (the renal function test was uniformly high, and there was no albumin); the second, the clearing up of the case without pelvic sequalae.

I heartily endorse what Dr. Guthrie has said in regard to this case being a good demonstration of the extreme value of sodium thiosulphate in this type of poisoning.

ANNUAL GRADUATE FORTNIGHT OF THE NEW YORK ACADEMY OF MEDICINE—An unusual opportunity to study the degenerative diseases of old age will be given by The New York Academy of Medicine October 1 to 13 by means of a program of lectures, clinics and courses in hospitals and teaching institutions.

This is to be the first "Annual Graduate Fortnight" of the Academy, inaugurating a form of graduate medical education novel in this country. In October of each year a problem of medicine or surgery of outstanding importance and interest to practising phycicians will be selected. The topic for 1928 is described as "The Problem of Aging and Diseases of Old Age."

No fees are to be charged for the Fortnight. It is not expected that every physician will feel disposed to attend all of what will be a program of long duration each day. Special courses to be arranged in conjunction with the sessions by medical schools and teaching hospitals may, however, carry a nominal charge for those who attend them.

Sessions are scheduled for morning, afternoon, and evening, with suitable arrangements for physicians from out of the city to have supper served at the Academy between the afternoon and evening sessions.

LEPROSY COMPLICATED BY SYPHILIS AND HYPERNEPHROMATOSIS.*

REPORT OF A CASE.

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U. S. MARINE HOSPITAL NO. 66, (NATIONAL LEPROSARIUM),

CARVILLE, LA.

Justification for report of this single case, it is thought, lies not only in the unique pathologic complex, but in the patient's comparative freedom from clinical symptoms, one of the diseases having existed unsuspected for a considerable length of time.

Figure 1—Left kidney and adrenal.

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*Read before the Sixth District Medical Society, Carville, La., December 10, 1926.

**Approved for publication by the Surgeon General of the United States Public Health Service.

Figure 2—Right kidney and adrenal fused.

The patient, a white, male American, was admitted to the Hospital at the age of 53 with a bacterioscopically confirmed diagnosis of leprosy. Previous medical, family and epidemiological histories were not instructive. His leprosy was estimated to have existed for ten years.

Physical examination on admission revealed nothing atypical; he presented evidences of mixed leprosy, having macules on the face, chest and arms; thickened, pendulous ear lobes; analgesia and thermanesthesia along the courses of the ulnar and external popliteal nerves.

For twelve years of his stay in the hospital he presented no clinical symptoms of especial interest save that in the course of this time the symptoms of mixed leprosy gave way by resolution, leaving him almost purely anesthetic in type so that in 1921 he was reclassified as an anesthetic leper having extensive areas of anesthesia on legs, arms and trunk and a few smooth macules. The ear lobes no longer had the doughy consistency of leprous ears but were pliable and shrunken. Great difficulty was encountered in demonstrating *mycobacterium leprae.*

A large ulcer completely encircled the lower third of the left leg and a smaller one about 4 inches in diameter existed on the lower third of the right leg. These ulcers presented sharply defined margins and penetrated deeply into the subcutaneous tissues, with islands of rugged granulation throughout. They bore a clinical resemblance to both the ulcers of tertiary syphilis and the so-called trophic ulcers of leprosy.

A laboratory diagnosis of syphilis was made by Kolmer (1), the patient's serum being strongly positive with both the Kolmer and older routine Wassermann reactions; the patient presented presumptive clinical evidence only of syphilis, in the ulcers on his legs.

Previous to his last illness, the patient maintained the cheerful, uncomplaining temperament shown during his sojourn in the hospital. Ten days before his death, he complained of malaise and was admitted to the infirmary. Routine clinical and laboratory examinations failed to reveal anything of additional interest. At the end of three days, he became semi-comatose, with dysphagia and incontinence of urine and feces. By the end of the sixth day he was completely comatose and died on the tenth day after admission to the infirmary.

Abbreviated post-mortem findings are as follows:

Thorax: lungs, edematous; heart grossly normal, aside from a few calcareous deposits on the margin of the tricuspid valves; aorta, normal in size, with calcareous plaques, varying in size from 1 mm. to 1 cm. in diameter, in the intima throughout almost its entirety.

Abdominal cavity: The liver, on its superior surface, just above the costal margin, showed a firm, white, fairly well outlined mass, approximately 5 cm. in diameter, this mass was calcareous on its margins with a caseous center. The inferior surface of liver was firmly adherent to a large mass

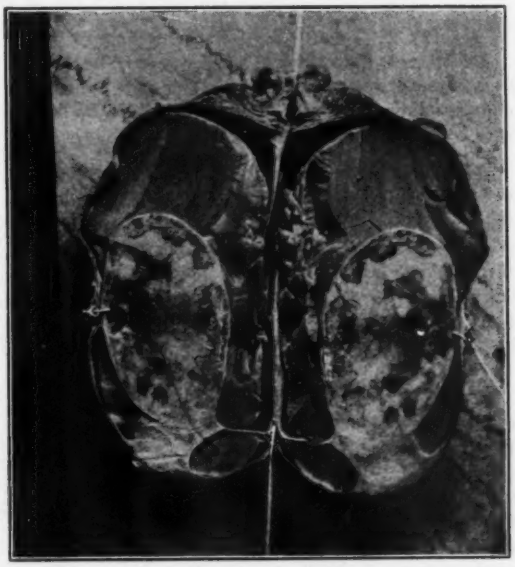


Figure 3—Right testis and tunicae

Figure 4—Liver: margin of gumma (left), capsule of Glisson (above) and compressed hepatic tissue (right) X40.

which, in turn, was attached to the upper pole of right kidney. The liver was about one and a half times its normal size, pale yellow in color; cut surface was pale yellow and greasy.

In the small intestine, about 60 cm. from the ileo-cecal valve was a firm encircling mass, 6x4x4 cm. in size, with a loop of gut attached on its lateral surface. The adhesions were comparatively fresh and easily broken; when stripped away, disclosed a perforation through the tumor, 0.5 cm. in diameter.

The left kidney was 11x5x4 cm. in size. On section the renal substance bulged slightly and the capsule stripped easily. Left adrenal, 8x4x4 cm., was adherent to tail of pancreas. (Plate I).

The right kidney, including a tumor mass, measured 15x8x6 cm. Lower portion was dark red, the upper, gray. Upon sectioning, the lower portion (9x8x6 cm.), was found to be kidney structure compressed at its upper pole by a grayish tumor mass (7x8x6 cm.), apparently the adrenal, penetrating the kidney and leaving an indistinct line of demarcation between the two structures. (Plate II).

The left testis was 7x5x5 cm. in size, firm in consistency, normal markings almost absent. On the right side of the scrotum was a sack 12.5x6.5x7 cm. containing with the testis, fluid under tension, the sack was placed in 10 per cent formalin for fixation. After fixation, the mass was sectioned, showing the testis 8.5x5x5 cm. surrounded, except at the lower pole, by a gray, hyalin substance. The testis was light gray with red areas. (Plate III).

Histologic findings:

Lung: Contains a large amount of fluid and red blood cells.

Aorta: Hypertrophy of fibrous connective tissue, endothelium in many areas absent.

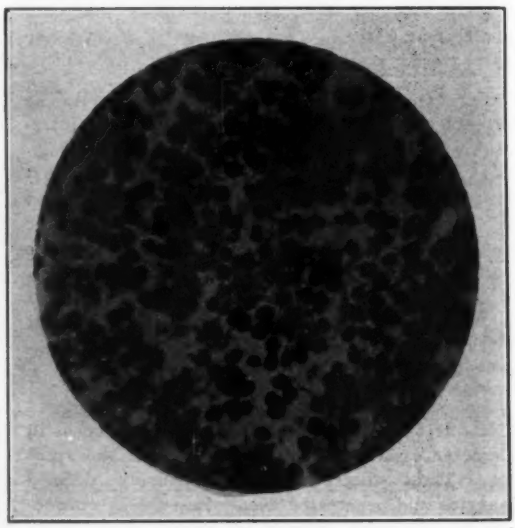
Liver: Capsule thickened. Hepatic cells show vacuolation. Increased amount of connective tissue with round cell infiltration present. Dipping down from the capsule is a fibrous, encapsuled, caseous mass. (Plate IV).

Tumor in small intestine: Consists of hyperplastic adrenal cells, very small amount of glandular and muscular tissue present.

Kidney, Left: Cloudy swelling.

Adrenal, left: Composed almost entirely of hyperplastic adrenal cells.

Kidney, Adrenal and Right: Upper portion composed entirely of adrenal cells, normal cells compressed, normal relationship destroyed, hyperplasia of densely packed round cells averaging 7 u in diameter with very little interstitial tissue, lower portion consists of kidney structure. Line of demarcation between structures very poorly defined, kidney capsule being replaced by adrenal cells. The adrenal cells are pentrating the renal structures, replacing tubules and glomeruli, though the latter to a less degree. Tubules show cloudy swelling. (Plate 6.)



Fgiure 5—Adrenal; dense agglomerations of round sarcoma-like cells with small amount of interstitial reticulum X600.

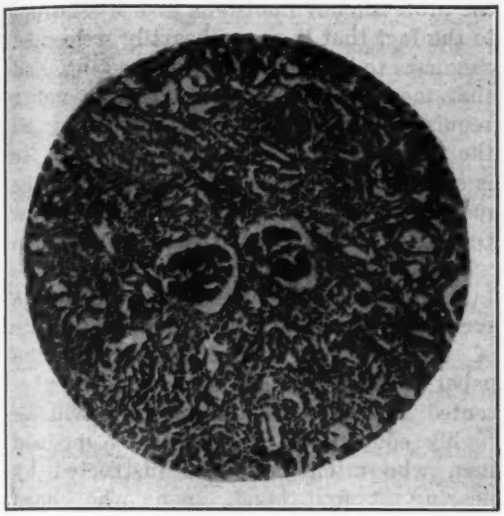


Figure 6—Right kidney, cortex of upper pole. Replacement of tubules by adrenal cells. two glomerules apparently intact X144.

Testis, left: Composed almost entirely of adrenal cells with very small amount of nearly normal testicular structure.

Testis, right: Composed entirely of adrenal cells—no testicular structure found.

Spleen: Capsule thickened, increase of interstitial tissue; amyloid degeneration present in malphigian corpuscles.

Bacterioscopic examination of tissues stained by the Ziehl-Neelson method revealed rare acid-fast rods in the left kidney and in the liver.

Summary: A case of leprosy complicated with syphilis and hypernephromatosis is reported.

The clinical symptoms of leprosy subsided during approximately twenty-two years leaving almost no sequellae. Post-mortem examination revealed no pathognomonic signs of leprosy; a few acid-fast rods, probably "lepra bacilli" were found in the liver and left kidney.

The serologic diagnosis of syphilis was confirmed at autopsy by the presence of gumma and probable syphilitic cirrhosis of the liver, and aortitis.

Unsuspected double hypernephromatosis of adrenals and right kidney found at autopsy with metastatic growths in both testes and in the ileum with perforation and localized peritonitis.

REFERENCES:

Kolmer & Denney: The Wassermann Reaction in Leprosy: with special reference to the new complement fixation technic. Arch. Derm & Syph. 8:63-72. 1923.

DIAGNOSTIC STANDARDS OF TUBERCULOSIS—In 1917 a Committee on Diagnostic Standards, organized by the National Tuberculosis Association, set to work to formulate as simply and accurately as possible standards and criteria for the diagnosis of tuberculosis. The seventh edition of Diagnostic Standards for Pulmonary and Glandular (Hilum) tuberculosis was published November, 1926, in booklet form by the Committee.

1. When constitutional symptoms and definite past history are absent or slight, there should be demanded definite signs in the lungs, including persistent rales usually in the upper half of the lung, or definite and characteristic parenchymal changes as shown by the roentgen-ray, or the finding of tubercle bacilli. (By "persistent" is meant that the rales must be present after cough at two or more examinations, the patient having been under observation at least one month.)

2. In the presence of constitutional symptoms, such as loss of weight and strength, etc., as defined above, there should be demanded some abnormality in the lungs on physical or roentgen-ray examination or both (but not necessarily rales).

3. Usually a process in the upper half of the chest should be considered tuberculous and a process in the lower half non-tuberculous, until the contrary is proved.

4. Hemoptysis or pleurisy with effusion is only presumptive evidence of the disease.

5. Pain in the chest and shoulders, night-sweats, digestive disorders, etc., require careful examination of the lungs for evidence of the disease. The presence of any extra-pulmonary tuberculous lesion necessitates careful examination of the lungs. This includes especially fistula in ano, adenitis, joint tuberculosis, etc.

6. In every doubtful case one should demand that the patient be kept under observation and a record kept of pulse, temperature, weight, etc., for at least one month, with repeated sputum examinations, before a definite diagnosis is made. The importance of careful and thorough observation for at least one month is to be emphasized.

7. Tuberculin tests and other special laboratory methods are of use only when in the hands of those specially trained and experienced in their interpretation.

The booklet also includes precise definitions of symptoms commonly encountered, classifications of diagnosis according to lesion and recommendations for the disposition of patients according to stage of disease.

"Diagnostic Standards" may be obtained free from the Tuberculosis & Public Health Association of Louisiana, Box 578, 535 St. Charles Street, New Orleans, La.

NEW ORLEANS
Medical and Surgical Journal
Established 1844

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AMERICAN COLLEGE OF PHYSICIANS

The Journal takes great pleasure in welcoming the Fellows of the American College of Physicians who are coming to New Orleans at the invitation of the Orleans Parish Medical Society and the Louisiana State Medical Society for their twelfth annual clinical session. It is earnestly to be hoped that many members of the College will take advantage of the opportunity of seeing the delightful old City of New Orleans, as well as the opportunity of hearing papers and addresses from some of the most distinguished clinicians and internists in the United States. The Journal wishes to call the attention of members of the profession of Louisiana and Mississippi to the fact that they are heartily welcomed as guests to be present at this meeting, and that membership in the College is not a requisite to the privilege of attending all the functions of the College. A small fee is charged for necessary expenses from the men who are not actually from New Orleans. To the New Orleans profession who have been so cordial and enthusiastic in their efforts to make this meeting a success, everything is offered as guests of the college. The character of the papers and symposia which are to be presented indicate that the meeting will be highly educational so that every medical man who attends will be instructed by hearing at first hand, men who have studied particular ways of treatment and diseases of special types.

The American College of Physicians is an altruistic organization. Its aims are to encourage medical education, research, clinical investigation and to foster measures for the prevention of disease and for improving public health. It was also formed for the purpose of organizing internal medical men so that they may see that only the highest standards are followed and practiced in their particular branch of medicine. The clinical session represents the educational feature of the organization, whereas the other purposes and functions of the College of Physicians are ever present and are being observed and followed throughout the year. It behooves thinking internists to take advantage of this opportunity to enlarge their range of vision and to increase their knowledge of disease by hearing the scientific papers and observing the clinics which will be held in New Orleans from the fifth to the ninth of March.

MODERN METHODS OF MEASUREMENTS.

The Britten Metric Bill is now up for action by the United States Congress. This bill requires that the metric system be adopted universally throughout the

country. The reasons that the bill should be adopted are numerous and many. Suffice it to say that the metric system has been adopted in every country in the world except the United States and Great Britain, and is the universal standard of measurement not only in civilized but in countries which we would naturally consider to be more or less in a state of semi-civilization. In its application of medicine, the metric system is without doubt the most satisfactory system that has ever been employed in this country. Incidentally it is the only system that has been legalized in this country, as in 1895 Congress passed a law making the use of the metric system compulsory in all medical branches of the United States Government. The United States Pharmacopeia employs the metric system first, and allows the old system as a secondary alternative.

The chief objection to the metric system by medical men is invalid to wit that prescriptions written in the metric system are changed back to the apothecary system by the druggists with consequent great liability to error. If they do change the metric system back to the old system it is because they have been corrupted by the physician who has employed this latter form in writing his prescriptions. The student of pharmacy is taught only the metric system. The advantage of a decimal system in medicine in making up solutions and in preparing formulas is so obvious that it is unnecessary to advance arguments as to why this system should be employed, a system which could be learned in fifteen minutes by any practitioner of medicine.

NEW OBSERVATIONS ON THERAPY.

Several unusual forms of therapy recently introduced in the treatment of disease have been extensively used in the immediate past and still are being widely used now in the present. These remedies include insulin in the treatment of diabetes, iodin in certain types of goiter, and liver, or liver extract, in pernicious anemia.

Insulin has stood successfully the test of a few years' time, although the question has never been answered "does insulin improve carbohydrate intolerance in diabetes?" Robinowitch[1] attempts to respond to this query. In doing so he points out first that the only true criterion on which to consider the information valid is from the study of the chronic diabetic and not the individual whose tolerance is lowered by infection, or the juvenile diabetic, or the acute diabetic who has for some reason or another a sudden dysfunction of the pancreas. In his clinic there have been over 1,200 diabetics. In controlling the three important variables: diet, exercise and acidosis, he found that it was possible to reduce the amount of insulin taken, but only if undernutrition was maintained, suggesting that the results were dependent upon proper dietary rather than improved carbohydrate tolerance.

The introduction of liver and liver extract, although suggested as a therapeutic measure a little less than two years ago, has resulted in very widespread employment of this food in the treatment of pernicious anemia. It naturally is to be expected that sooner or later other types of parenchymatous organs would be employed. Such has been the case. At the Rochester Clinic[2] two patients suffering from pernicious anemia were fed 250 grams of kidney daily, without other foods of value in blood regeneration. Response to kidney feeding in these cases was as spectacular as has been observed in the treatment of pernicious anemia with liver.

Iodin has been shown to be of definite value in exophthalmic goiter. But the physisian has been warned time and time again that it is absolutely contraindicated in cases of toxic adenoma. In fact so far has this iodinphobia been carried that it has been suggested that iodin should never be given

(1) Rabinowitch, I. M.: Does Insulin Improve Carbohydrate Tolerance? Quart. J. M., 21:211-221, 1928.

(2) McCann, W. C.: Effect of Kidney in Blood Regeneration in Pernicious Anemia. Proc. Soc. Exper. Biol. and Med., 25:255-258, 1928.

to thyroid patients because of the danger of confusing a case of exophthalmic goiter and toxic adenoma. From the University of Michigan[3] appears a paper which shows that the patient with toxic adenoma, previously untreated with iodin, responds exactly as do unselected cases of exophthalmic goiter. Any differences that exist are not qualitative, but on the contrary are quantitative. This paper would seem to confirm the stand taken by many practitioners of medicine that iodin is of value in the treatment of all types of thyroid disturbance. As a side issue it would tend to show that hyperthyroidism or toxic adenoma and exophthalmic goiter are not two separate and distinct diseases, a belief very generally advanced by the endocrinologist and surgeon.

SIGNIFICANCE OF THE INSIGNIFICANT.

It has been frequently remarked that success in diagnosis in medicine depends not so much upon the appreciation of the big things, but the observation of smaller and apparently inconsequential features which escape the eye and the observation of the average man. In conformation of this oft-quoted statement, attention might be called to two recent papers, the one by Dr. George Blumer[1], who has recently brought out a large three volumed book, and the other by Dr. Paigniez[2] of Paris. Dr. Blumer notes that in certain patients who have metastatic carcinoma of the spinal column, a difficulty in turning over in bed is one of the outstanding features. This observation is particularly of value, obviously, in patients who have hidden and perhaps unsuspected cancer, more especially of the prostate. Even in those patients in whom carcinoma is appreciated and recognized, spinal metastasis is a frequent occurrence and may not be suspected until this observation of the difficulty of the patient in turning over in bed has been made.

The French authority[2] writes that a meal of protein or one which contains a considerable amount of protein has a distinct and depressing effect on the blood pressure. In normal individuals it will cause a fall in pressure of as much as 20 m.m. of mercury, wheras an ever greater fall will occur in patients suffering with hypertension. This observation pertinently points to the advisability of inquiring as to the time of the last meal and the character of that meal, before taking the blood pressure of individuals in whom it is desired to get a true and trustworthy manometric reading. These two observations are significant. They are points which have been overlooked in the past. They indicate certain apparently minute details which at times may be of great importance in arriving at a diagnosis. It may be truly said that the ability to observe and appreciate the little and apparently insignificant helps materially in the making of a successful diagnostitian.

THE LATEST ATTEMPT TO COMBAT TUBERCULOSIS

The Tuberculosis and Public Health Association of Louisiana, as one of the constituent organizations in the National Tuberculosis Association, is partaking in a nationwide campaign for the early diagnosis of tuberculosis, which is to be held during March of this year The organization calls attention to the fact that this campaign is conducted to reach both the laity and the medical profession. It points out that the failure to recognize the disease early accounts among many patients for the failure ultimately to conquer the disease in those individuals. This fault lies in large part with the patient, but the doctor is not entirely blameless. This campaign will attempt to teach both. In Louisiana small booklets will be sent to members of the

(3) Youmans, J. B. and Kampmeier, R. H.: Effect of Iodin in Toxic Adenoma, Arch. Int. Med., 41:66-74, 1928.

(1) Blumer, George: A Note on Difficulty in Turning Over in Bed. Boston M. & S. J., 197-1260, 1928.

(2) Pagniez, Ph. and Escalier, A.: Influence de l'ingestion d'albuminordes sur la pression arterielle. Presse méd., Jan. 4, 1928:1.

medical profession illustrating the signs and symptoms of early tuberculosis. The laity will be instructed by special articles in the press, by movies and other means. The physician is asked to cooperate by the careful examination of patients who come to him as a result of this movement, and he is asked to study the booklet which contains many helpful hints in the diagnosis of this dread disease, the morbidity of which in the past few years seems to be on the increase, particularly among young women.

A CORRECTION.

The attention of our readers is directed to an unfortunate error which appeared in the Bibliography of Dr. Matas. In the list of his publications printed on page 512 of our February issue ("The Matas Number") a supplementary list is appended under the statement that "the following addresses and lectures delivered by Dr. Matas have *never* appeared in print." While this is true of a number of the contributions quoted, the majority of the papers reported as unpublished have been printed in full or in part, in the periodical press, in the Transactions of Societies, in separate pamphlets or in some other form of publication.

In explanation, we would state that during Dr. Matas' long absence in Europe last summer, the index cards which had been diligently and faithfully recorded by the Librarian of the Medical Faculty of Tulane, Miss J. G. Rogers, up to the time when she was compelled to give up work on account of illness, were filed in many instances, only as titles pending the printing of the articles, which was often delayed for months and longer. For this reason, the exact references to the time and place of publication did not appear on the cards that were copied by our clerks, who hastily concluded that they had never been published.

We greatly regret that in our desire to surprise Dr. Matas with a catalogue of his writings, the printer's proofs were not submitted to him for revision, as this error would have been avoided. Dr. Matas has since been given an opportunity to correct and amend his bibliography and the revised catalogue which is now in press, will be reprinted in pamphlet form for distribution to the libraries of the medical Faculty and of the Orleans Parish Medical Society, as well as other leading medical libraries of the country, where it will be available for reference.

CORRESPONDENCE.

February 10th, 1928.

To the "Journal Committee" of the Louisiana State Medical Society, Dr. Musser and Associate Editors of the New Orleans Medical and Surgical Journal:

My Dear Friends:

I have not yet recovered from the dazzling effects of the "Matas banquet" held on December 20, 1927, and the eulogies of my eloquent colleagues, Gelpi, Fossier, Chassaignac and Bass were still ringing in my ears when the "Matas number" of the Journal made its appearance on February 1st, in time to completely upset what was left of my emotional equilibrium when brought face to face with this added and crowning testimonial of your regard and friendship.

The "Matas number" has been lying on my desk for several days with no prospect that in my perturbed state of mind I could ever regain sufficient composure to do justice to my feelings and much less to the generous motives that prompted the trustees and editors of the *Journal* to devote so much of their thought, labor and space to an exhaustive review of my professional activities and in praise of my unpretentious worth.

As I hold the "Matas number" and see the printed image of myself, so conspicuous in the frontispiece, it seems to say in a puzzled and quizzical way, "Here I am; don't you see my dilemma and what are you going to do to help me out of it?" Indeed it is a dilemma in which I find myself confronted; on the one hand, with an incalculable debt of gratitude to acknowledge and, on the other, with no adequate means to pay it, even by borrowing copiously from the superlatives and adjectives of the lexicon. All that I can do is to declare myself verbally insolvent and put myself at the mercy of my creditors. Yes, my dear *Journal*, I confess myself utterly and hopelessly bankrupt in so far as I may draw on

my vocabulary to liquidate my debt for the over generous, nay prodigal, manifestations of your favor that now and so often in the past you have chosen to bestow upon me. Whatever wealth in words I may have once possessed to express my gratefulness has been exhausted by frequent repetition of the same and, I fear, futile efforts to express it. Whatever I could now say of the "Matas number" and of the emotions evoked by the columns of the *Journal* (on so many occasions the Editorial Staff in dedicating this number to me, would be a mere repetition and reiteration of what I have said or tried to say, verbally or in the columns of the *Journal* (on so many occasions in recent years), in thankful acknowledgement of the unfailing kindness and favor with which the *Journal* as the authorized organ of the Medical profession of Louisiana, has distinguished and honored me.

I have tried on this occasion to find some original or different way of giving utterance to my thankfulness in words that would not be worn threadbare by long usage, but in vain. No matter in which way I began, the attempt always ended in the same refrain, like that of the old familiar Creole love song: "Mo l'aimé, toi chère, mo l'aimé toi de tout mon coeur."

And now my dear Mr. Editor, I trust you will believe me when I say that though I have failed as a composer of a hymn in "laus magna gratitudinis," that might better fit your merits or my wishes—you will know by these lines that there are sentiments of affection and appreciation for the Journal and the splendid organizations that it represents—that remain too deeply anchored in the depths of the heart to find their way to the surface in the mere bubble of words.

Please allow me in closing, to avail myself of this opportunity and of your good will to acknowledge the many congratulary letters and messages that I have received since the publication of the "Matas number," from professional friends and others here and elsewhere throughout the country, whom I wish to thank but cannot reach individually at this moment, except through the wide circulation of the *Journal*.

Again, I beg to remain, as ever,

Yours faithfully and gratefully,

RUDOLPH MATAS.

THE PRACTICE OF MEDICINE IN THE COUNTRY—If the supply of country doctors is to be replenished, these doctors must come from among the young men and women of the country districts, as was the case in former times. The type of graduates now being produced by our medical schools will not settle and practice in the country districts. This is conclusiely proved by the experience of recent years.

The family doctor is rapidly becoming extinct. He is being supplemented by the specialist to a degree that is not warranted under practical conditions.

It is poor comfort to the expectant mother in the farm home to know that in the distant city there is an elaborately equipped maternity hospital, with specialists in obstetrics in attendance, when our system of medical education to an increasing extent compels her to rely upon a midwife or the friendly offices of a neighbor in facing her ordeal. It is not necessary to elaborate on this phase of the situation. Parallel illustrations will readily suggest themselves.

The need is for more general practitioners, whose outlay in time and money in securing their medical education will be such that their services will be within the reach of the rank and file of the people, who constitute the overwhelming majority of our population, whether urban or rural.

We are not advocating one class of doctors for the country and another for the town. The country doctor, who is compelled to rely largely upon his own resources, without many of the facilities afforded in city hospitals, and without the advice of specialists, should be the best product of our medical schools.

Neither are we advocating any lowering of medical standards. What is required is more practical instruction, which may be acquired in less time and with the expenditure of less money than under prevailing conditions. We find that it is the opinion of many physicians of the highest standing that present medical education is not giving the most resourceful practitioners for ordinary service; it is producing practitioners who are dependent upon hospitals and laboratories, while these facilities according to authoritative medical opinions are necessary in hardly more than 10 per cent of illnesses and accidents. It is in the care of this 90 cent of illnesses for which independent, resourceful physicians are necessary, that the rural communities are mostly in need. For the 10 per cent of emergencies requiring specialists and hospital service, rural people can, perhaps, in most cases by an effort utilize urban facilities. However, the cost of these distant facilities make them impracticable by rural people except in cases of emergency. Because of their cost they are not practical for 90 per cent of ordinary illnesses and accidents which, in the aggregate, produce the greatest sum of suffering, and whose early neglect leads to the serious emergencies. This 90 per cent of illnesses cannot be handled through distant doctors and urban hospitals. If the people are to have adequate medical service, they must have physicians in their own communities.

HOSPITAL STAFF TRANSACTIONS

TRANSACTIONS OF THE SONIAT MERCY STAFF MEETING.

At the regular monthly staff meeting of the Mercy Hospital, the following officers were elected for the ensuing year: Dr. E. L. Leckert was unanimously re-elected chairman; Dr. E. A. Ficklen, vice-president; Dr. Maurice Campagna, secretary; Dr J. F. Dicks, treasurer.

Dr. Erasmus Fenner presented a paper on Hodgkins' disease, emphasizing the difficulties incurred in diagnosis due to lack of a typical clinical picture. The case was one which had been under observation since 1923, in which a primary diagnosis of tuberculous cervical adenitis and been made. At that time a pathological report was made of lymphosarcoma; radium therapy was instituted and the child sent home to be subsequently readmitted with various symptoms of distention, anemia and cachexia. The true diagnosis was not made until a few days prior to death, when an antimortem diagnosis of Hodgkins' disease was made and ultimately confirmed at the autopsy table.

Dr. Chalaron noted in the history that the child passed blood in the urine. He was interested in knowing the condition of the kidneys at autopsy; how to explain the hematuria in the absence of kidney pathology.

Dr. Hauser stated that the slide made in 1923, was again examined after death and it was found that the previous diagnosis of lymphosarcoma was erroneous. This was a true case of Hodgkins' disease and the typical Dorothy Reed cells were found present in the lymph nodes. The blood picture found in this particular instance was not characteristic of Hodgkins' disease, except for a persistent leukopenia. He also stated that there was no kidney pathology found at autopsy.

Dr. Campagna stated that two most frequent diseases confounded with Hodgkins' disease are tuberculous cervical adenitis and lymphosarcoma, and that the final diagnosis could only be made by the microscope. The earliest manifestations of Hodgkins' disease were a pruritis accompanied by itching and very often an associated diarrhea. The temperature is intermittent in character and the symptoms often disappear for a short time only to recur later with greater intensity. Therapeutically radium has been found of some benefit early in the disease. An eosinophilia with a leukopenia is found in about fifty per cent of cases.

Dr. Ficklen presented a case of septic infarct of the kidney following an appendectomy, in which there was marked hematuria. Cystoscopic examinations were unsatisfactory, due to the difficulty of introducing the catheter into the affected organ. Nephrectomy was performed, the patient making an uneventful recovery.

MAURICE CAMPAGNA, M. D.,
Secretary.

GONORRHEAL ARTHRITIS—Gonorrheal arthritis has been polyarticular in 58 per cent and monarticular in 42 per cent of cases. The involved joints in their order of frequency have been: knee, 58; ankle, 50; hip, 32; wrist, 21; shoulder, 19; phalangeal, 17; elbow, 13; metatarsophalangeal, 8; spine, 8; metacarpophalangeal, 7; sacro-iliac, 1; temporomaxillary, 1; sternoclavicular, 1. The symptomatology of gonorrheal arthritis in its acute and chronic forms differs in no material way from that of an arthritis due to other infections, it being borne in mind that the gonococcus may cause a suppurative inflammation; also that metastatic joint involvement may arise from mixed pyogenic postgonorrheal foci, lurking in the seminal vesicles or prostate gland. The diagnosis of the gonococcic origin of a synovitis or arthritis, occurring in the second or third week of an acute gonorrhea, does not offer any difficulties; the discovery of gonococci in the genito-urinary tract or its appendages is almost conclusive, and the demonstration of gonococci in the aspirated fluid of the suspected joint is pathognomonic. The tendency to rapid polyarticular involvement of the larger joints is most characteristic. Acute gonorrheal arthritis must be differentiated from acute rheumatic fever. The prognosis in gonorrheal arthritis should always be guarded. It is, however, directly dependent on the promptness of the most efficacious treatment, and is better in the acute than in the chronic form of the disease, before degenerative or proliferative anatomic tissue changes occur.

—Thomas, B. A.: J. A. M. A., Dec. 24, 1927. p.

TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

During the past month the Board of Directors has held its regular meeting, and the Society two Scientific meetings.

At the Board of Directors meeting the regular routine business was transacted and the following men were elected to Membership:

Active Membership—Dr. Ambrose H. Storck.

Interne Membership—Dr. Norman E. Applewhite.

The regular Scientific Meeting of February 13th was dispensed with. A joint meeting of the New Orleans Gynecological and Obstetrical Society and the Orleans Parish Medical Society was held on February 15th, at which time Dr. W. W. Chipman of Montreal and Dr. John O. Polak of Brooklyn, New York, were the guests of the evening.

The title of Dr. Chipman's paper was "Acute Conditions in the Lower Abdomen of the Female," and that of Dr. Polak's, "The Toxemias in Pregnancy." These papers were discussed by the members.

Both Dr. Chipman and Dr. Polak are of international reputation and experienced teachers.

At the meeting held February 27th the following program was presented:

"The Ptosis Support for the Thin Individual"
By.....Dr. A. K. Duncan
Discussion by Drs. A. E. Fossier, I. M. Gage
P. A. McIlhenny, and closed by Dr. Duncan

A Moving Picture, by Courtesy of Dr. Alton Ochsner.
"Infections of the Hand."

The second quarter premium on the group insurance is due March 5th, and the members are urged to pay this premium immediately.

DO NOT LET YOUR INSURANCE PREMIUMS LAPSE.

TREASURER'S REPORT.

Actual Book Balance, 12-31-27	$ 485.86
Receipts during January	3,651.05
	$4,136.91
Expenditures	$2,674.02
Actual Book Balance, 1-31-28	$1,462.89

REPORT OF LIBRARIAN.

Thirty-one books have been added to the Library during January. Of these 16 were received from the New Orleans Medical and Surgical Journal and 15 by gift. Gifts of journals have been received from Drs. Gladden, Talbot, Lanford, Bloch, Lurie and one book from E. L. King. A note of new accessions of recent date is appended.

The stairway between the two libraries is completed and will be of great benefit to the reference work of both libraries. The rooms for expansion furnished us have been constructed and the wall shelving is being built and stained at this time. As soon as this is finished we expect to make the necessary shifts.

NEW BOOKS—JANUARY, 1928.

Hess—Feeding and Nutritional Disorders of Infancy and Childhood. 1927.

Stern—Should We Be Vaccinated. 1927.

Fitzwilliams—Tongue and its diseases. 1927.

Wolbarst—Gonococcal Infection in the Male. 1927.

Moore—American Medicine and the People's Health. 1927.

Myers—Fighters of Fate. 1927.

Potts—Getting Well and Staying Well. 1927.

Coope — Diagnosis of Panceratic Disease. 1927.

Cowell—Hernia and Hernioplasty. 1927.

Fisher—Ophthalmoscopy, Retinoscopy and Refraction. 1927.

Cowan—Ophthalmic Optics. 1927.

Myers—Diagnosis, Classification and Treatment of Tuberculosis. 1927.

Coffey—Gastroenteroptosis. 1923.

MacKenna—Diseases of the Skin. 1927.

Morse — Emergencies in General Practice. 1927.

Clark—Radium in Gynecology. 1927.

American Neurological Association—Transaction. 1927.

Isthmian Canal Zone Medical Association—Proceedings. 1927.

Rockefeller Foundation — Methods and Problems of Medical Education. 1927. v. 8.

Darrah—Modern Baking Powder. 1927.

Orr—Treatment of Osteomyelitis. 1927.

Richardson—Current Significance of the Word Alum. 1927.

Ekehorn—Syphillis Fetuum. 1925.

MacAusland—Mobilization of Ankylosed Joints. 1923.

Campbell—Bats, Mosquitoes and Dollars. 1925.

Pusey — Importance of Being Historically Minded. 1927.

Hay—Graphic Methods in Heart Disease. 1921.

H. THEODORE SIMON, M. D.,
Secretary.

LOUISIANA STATE MEDICAL SOCIETY NEWS

H. Theodore Simon, M. D., Associate Editor.

To the members of the Louisiana State Medical Society.

Greetings:

The annual session is close at hand. The House of Delegates meets at Baton Rouge on Monday, April 9th; the scientific session starts on Tuesday following. We sincerely hope that all that possibly can get off will leave and join the East Baton Rouge Parish doctors in making this year's meeting the greatest ever.

The American College of Physicians is meeting in New Orleans in March; an organization such as this coming to our state should foster interest in medical matters to such an extent as to help swell the attendance at Baton Rouge.

Our hosts at Baton Rouge got an early start with their preparations and have been steadily on the job; if those of us from the other parishes will show the proper appreciation of these efforts, the capital of our state can then boast of the best meeting in the history of our society. Remember that the legislature will meet in Baton Rouge a little later and it is imperative that we make a favorable and lasting impression there.

Anticipating hearty co-operation from our membership, I am

Yours to serve,

ARTHUR A. HEROLD,
President.

MEDICAL NEWS NOTES.

The Tri-State Medical Society of Louisiana-Arkansas-Texas held its annual meeting in Shreveport, January 18-19, under the presidency of Dr. S. A. Collom of Texarkana. The section chairmen were: Surgery, Dr. P. Hunt of Texarkana; Medicine, Dr. A. A. Herold of Shreveport; Gynecology, Dr. C. H. Mosely of Monroe; E., E., N. & T., Dr. G. W. Hartt of Marshall; Urology, Dr. I. B. Rougon of Shreveport; Pathology, Dr. N. Klein of Texarkana; Miscellaneous Topics, Dr. J. J. Terrill of Dallas. An excellent program was arranged, visitors including Drs. Hollender of Chicago, Campbell of Memphis, Henderson of Rochester, Moore of Houston, Sellers and Levin of New Orleans, Dowman of Atlanta and Caulk of St. Louis.

Texarkana was selected for the 1929 meeting place and the following officers elected: President, Dr. Guy A. Caldwell of Shreveport; Vice-Presidents, Drs. S. C. Barrow of Shreveport, M. L. Norwood of Locksburg, Ark., and W. G. Hartt of Marshall; Secretary-Treasurer, Dr. Frank H. Walke of Shreveport, re-elected.

The Shreveport Medical Society, after an absence of over two years, has decided to resume holding its regular meetings at the Charity Hospital. In 1926, meetings were held at the North Louisiana Sanitarium and from January, 1927 to date, they have been at the Highland Sanitarium.

Much interest throughout the state is being manifested in the coming session of the American College of Physicians in New Orleans, March 5-9, inclusive; a good attendance is anticipated from North Louisiana.

The Baton Rouge meeting of The Louisiana State Medical Society also promises to be well attended. The House of Delegates meets on Monday, April 9th and the scientific session begins the following day. Elaborate preparations are being made by the East Baton Rouge Parish doctors; Dr. Jabez N. Jackson, president of the A. M. A. has agreed to be present, participating in the scientific program and speaking at the public session.

St. Tammany Parish Medical Society held its regular monthly meeting on February 10, 1928, in the St. Tammany hotel at Mandeville with the following members present, Doctors F. F. Young, President; Roland Young, Secretary-Treasurer; W. L. Stevenson, J. K. Griffith, F. R. Singleton, J. F. Buquoi, J. K. Polk, R. B. Paine, H. D. Bullock and A. G. Maylie and E. E. Lafferty of Bogalusa.

Dr. E. E. Lafferty gave a discourse, illustrated with many roentgen-ray pictures on "Common Fractures of the Long Bones" which was as instructive as interesting, holding the attention of all the members, many of whom discussed the subject matter at the close of the discourse.

Several unusual clinical cases were reported and debated by the members, after which the Society adjourned to meet again March 9, 1928, at Covington.

The Bi-Parish Medical Society of East and West Feliciana Parishes met in the office of the President, Dr. E. M. Toler, Clinton, Louisiana.

An interesting and instructive paper was read by Dr. Wood of the East Louisiana State Hospital. His subject was "Cholecystography."

After the meeting dinner was served at the Rist Hotel. The next meeting will be with the East Louisiana State Hospital, the first Wednesday in April.

The Lafourche Valley Medical Society held its quarterly meeting at Napoleonville, La., on Wednesday, February 8. This being the occasion of the annual election of officers the following were elected to serve for 1928-1929.

President, Dr. Dawson T. Martin; Vice-President, Dr. Chas. J. Barker; Secretary-Treasurer, Dr. Chas. S. Roger. The meeting in every sense proved highly interesting to those in attendance, having had papers presented by fellow members which because of the medical and scientific interest conveyed, elicited quite a bit of discussion by the membership. The society was honored by having in attendance several distinguished members and guests of New Orleans in the person of the viz: Dr. M. O. Miller, Charity Hospital Surgeon; Dr. P. H. Jones, Charity Hospital physician; Dr. T. J. Dimitry, eye specialist; Dr. H. V. Unsworth, nervous and mental diseases; Dr. A. E. Fossier, ex-president of Orleans Parish Medical Society. After partaking and indulging in the banquet a happy climax to the evening's entertainment, the meeting adjourned to the second Wednesday in May.

The members of the Third District Medical Society and guests attended a meeting at the Elks Home in Lafayette, La., on Wednesday, February 8. The meeting was followed by a banquet at the Terrace Hotel. Dr. O. P. Daly of Lafayette was elected president for the new year; Dr. Dunshie of Rita, Vice-President; and Dr. P. H. Fleming, St. Martinville, Secretary-Treasurer. Dr. P. H. Fleming was chosen delegate to the State Medical Meeting, and Dr. M. E. Saucier of Lafayette, alternate. The retiring president, Dr. C. C. DeGravelles, Morgan City, presided at the business session with Dr. R. D. Voorhies, Lafayette, Secretary-Treasurer. Dr. Jules Dupuy and Dr. Carroll W. Allen of New Orleans spoke on medical themes. During the banquet at which Dr. Harold G. F. Edwards of Lafayette was toastmaster, toasts were given by Dr. Carroll W. Allen, Dr. Jules Dupuy and Dr. Lucien LeDoux of New Orleans, Dr. Daly of Lafayette and Dr. Ellis of Crowley for the physicians, Dr. J. R. Olivier of Lafayette, for the dental fraternity and M. A. Montgomery of Lafayette, for the pharmacists. The next meeting will be held at Lake Catahoula in St. Martin Parish during the month of June.

The Assumption Parish Medical Society has elected its 1928 officers as follows: President, Dr. T. B. Pugh, Napoleonville; vice-president, Dr. W. W. Pugh, Napoleonville; Secretary-Treasurer, Dr. Chas. S. Roger, Napoleonville; Delegate, Dr. W. E. Kittredge, Tallieu, P. O.; and Alternate, Dr. C. S. Roger, Napoleonville.

St. Martin Parish Medical Society has elected the following officers for 1928: President, Dr. J. S. Martin, St. Martinville; Vice-President, Dr. M. Boudreaux, Breaux Bridge; Secretary-Treasurer, Dr. P. H. Fleming, St. Martinville; Delegate, Dr. J. L. Beyt, St. Martinville; and Alternate, Dr. P. H. Fleming, St. Martinville.

Lafayette Parish Medical Society has elected the following officers for 1928: President, Dr. M. E. Saucier, Lafayette; Vice-President, Dr. M. R. Cushman, Lafayette; Secretary-Treasurer, Dr. Dr. H. G. F. Edwards, Lafayette; Delegate, Dr. H. G. F. Edwards, Lafayette; Alternate, Dr. O. P. Daly, Lafayette.

Vermillion Parish Medical Society has elected the following officers for 1928: President, Dr. W. A. Poche, Kaplan; Vice-President, Dr. A. A. Comeaux, Abbeville; Secretary-Treasurer, Dr. Thos. Latiolais, Kaplan; Delegate, Dr. Leo. Saporito, Kaplan; Alternate, Dr. A. A. Comeaux, Abbeville.

St. Mary Parish Medical Society has elected the following officers for 1928: President, Dr. C. C. DeGravelles, Morgan City; Secretary-Treasurer, Dr. A. C. Kappel, Franklin; Delegate, Dr. C. M. Horton, Franklin; Alternate, Dr. L. B. Crawford, Patterson.

DIED—Mary Dunan O'Rorke Mayer, in the 93rd year of her life, at Opelousas, Louisiana. Mrs. Mayer was the mother of three doctors well known in Louisiana, Dr. Fred J. Mayer, a former President of the Louisiana State Medical Society Dr. Chas. R. Mayer and Dr. R. A. Mayer.

NOTICE

At the request of Dr. C. A. Weiss, chairman of the arrangement committee of The Louisiana State Medical Society, you are urgently requested to make your hotel reservations early for the meeting of the Society in Baton Rouge, April 10 to 12, 1928, in order that the hotel committee may properly function.

SPECIAL ANNOUNCEMENT.

The 13th Annual Convention of the Catholic Hospital Association of the United States and Canada and the Second Annual Hospital Clinical Congress of North America will be held in the

Cincinnati Music Hall, Cincinnati, Ohio, June 18th to 22nd, inclusive, 1928. The Fourth Annual Convention of the International Guild of Nurses will be held at the same time, in the same building, at night meetings.

This Convention and Congress will be one of the largest and most important hospital meetings of the year, and will comprise general scientific meetings, special clinics or demonstrations of hospital departments, and three hundred special commercial and educational exhibits. Outstanding authorities in medicine, surgery, pathology, nursing, dietetics and hospital administration, architecture and engineering will lecture and demonstrate in specially planned clinics representing the various departments of the modern hospital. A professional program of the highest interest and value is now being formulated, and all persons interested in medical and hospital service are cordially invited to attend. Further information may be obtained from John R. Hughes, M. D., Dean of the College of Hospital Administration, Marquette University, Milwaukee, Wisconsin, who is General Chairman of the Convention and Congress.

THE BUDAPEST CONGRESS — The Fifth International Medical Congress for Industrial Accidents and Occupational Diseases is to be held in Budapest during September, 1928. The Executive Committee consists of the following: President, Dr. Tibor de Verebely, Professor at the University; Vice-president, Dr. William de Friedrich, Professor at the University; Secretary-General, Privatdozent Dr. George Gortvay, Section Chief.

The National Committee for the United States has been created and consists of the following: Dr. Volney S. Cheney, Chicago; Dr. R. W. Corwin, Pueblo; Dr. Eugene L. Fisk, New York; Dr. Otto P. Geier, Cincinnati; Dr. Leonard Greenburg, New Haven; Dr. George M. Kober, Washington, D. C.; Dr. W. J. McConnell, Philadelphia; Dr. Lloyd Noland, Birmingham; Dr. Francis D. Patterson, Philadelphia; Dr. George M. Price, New York; Dr. Frank L. Rector, Chicago; Dr. Wm. A. Sawyer, Rochester; Dr. Henry F. Smith, Philadelphia; Dr. C. E. A. Winslow, New Haven, and Dr. Emery R. Hayhurst, Columbus, Chairman.

Addresses and lectures are wanted from American physicians, dentists, and other specialists in the field. Such are requested to get in touch with the Chairman for the National Committee for the United States, Dr. Emery R. Hayhurst, Hamilton Hall, Ohio State University, Columbus, Ohio. General invitation is also extended to attend the Congress which will be arranged so as to co-ordinate with the Deutscher Naturforscher Tag" to be held in Hamburg, and the Orthopadenkongress to be held at Prague during the month of September, 1928.

CLINICAL ASPECTS OF JAUNDICE—Textbook classifications of jaundice, based on prolonged observation or on necropsy data, are frequently impracticable in clinical work, in which the essential need is to differentiate surgical and nonsurgical cases. The essentials to a working classification are: (1) the reaction of jaundiced serum to the van den Bergh reagent; (2) the height and behavior of the serum bilirubin curve as determined by the van den Bergh or icterus-index methods; (3) the quantity of bile reaching the intestine as determined by siphonage of the duodenal contents, and (4) the presence or absence of pain and its character when present. In differential diagnosis, the size and consistency of the liver, the palpability of the gallbladder, the presence of pruritus, the tint of the skin, the presence of diarrhea, and constipation and loss of weight are all of minor significance. Functional tests of the liver or pancreas have not yet attained diagnostic value in cases of jaundice. The tendency of jaundiced patients to bleed seems to be due in some cases to interference with normal clotting processes, and in other cases to the action of a toxin on capillary endothelium. In some cases in which a tendency to hemorrhage resists the administration of calcium or transfused blood, there may be spontaneous restoration of the factors which prevent hemorrhage. The prophylaxis of hemorrhage is thus summarized: 1. Routine administration of calcium chloride, 0.5 Gm. given preferably in 150 cc. of sodium chloride solution on three successive days. Dilution of the calcium solution and washing out the peripheral vein with sodium chloride solution following it will avoid thrombosis. 2. Transfusion, if prolonged coagulation time persists in spite of calcium administration, or if purpura is present. 3. Postponement of operation if these measures are not effective, and, if necessary, repetition of medical measures. 4. Frequent estimations of coagulation time by the Lee method, since this may reveal a tendency to spontaneous correction of delayed clotting.—McVicar, C. S. and Fitts, W. T.: J. A. M. A., 89:1927.

MISSISSIPPI STATE MEDICAL ASSOCIATION NEWS

J. S. Ullman, M. D., Associate Editor.

The regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held in Vicksburg, February 14, 1928. The following program was presented:

"Syphilis"—Dr. A. K. Barrier.

"Observations on the Thymus"—Dr. J. A. K. Birchett, Jr.

"Diagnosis of Varicella"—Dr. H. H. Haralson.

The North Mississippi Six Counties Medical Society met in New Albany on January 27th. The program was as follows:

"Diseases of Lachrymal Gland and Duct"—Dr. J. B. Standford, Memphis.

"Pelvic Infections"—Dr. Wm. T. Black, Memphis.

"Asthma"—Dr. B. S. Guyton, Oxford.

"Roentgen Diagnosis of Gastric Cancer"—Dr. C. H. Heacock, Memphis.

"General Considerations in Obstetrics"—Dr. J. C. Ayres, Memphis.

The following officers were elected for the ensuing year:

President—Dr. B. S. Guyton, Oxford.

Vice-Presidents—

Benton—Dr. W. F. Coleman, Hickory Flat.
Marshall—Dr. D. R. Moore, Byhalia.
Panola—Dr. G. H. Wood, Batesville.
Lafayette—Dr. A. W. Pigot, Oxford.
Yalobusha—Dr. J. S. Donaldson, Oakland.
Union—Dr. G. F. Cullens, New Albany.
Tippah—Dr. Charles Murray, Ripley.

One of the members at this meeting presented the following letter:

"Doctor:

"My stomish and my Back hurt me and when it stard in my stomish it go to my Back and when it stard in my Back it come to my stomish and hard not will rise in my stomish at my nable and move to my side and my nable will grow in and out about all the time and I swel in the fork of my Brest."

(Anyone who can make a diagnosis of the above case or who cares to make any suggestions as to treatment is requested to communicate with Councillor J. S. Donaldson, Oakland, Miss.)

Dr. D. W. Whitaker of Coffeeville has moved to Shelby.

The opening of a sanatorium at Centerville by Drs. Fields and Fields was recently announced.

Dr. R. T. Smith of Natchez has recently returned from post-graduate work at the Cook County and Mercy Hospital in Chicago.

Dr. John Shea of Memphis was a recent visitor to Natchez, Mississippi.

The Staff of the Vicksburg Sanitarium and Crawford Street Hospital held its regular monthly meeting, February 10, 1928, on which occasion the following subjects were discussed:

"Diabetic Gangrene of Hand and Arm"—Dr. G. M. Street.

"Carcinoma of Bladder and Vaginal Wall Treated by Radium"—Dr. A. Street.

"Gallop Rhythm"—Dr. L. J. Clark.

"Pansinusitis"—Dr. C. J. Edwards.

"Dental Cyst with Chronic Maxillary Sinusitis"—Dr. Edley H. Jones.

"Septicema"—Dr. W. H. Parsons.

Pathologic Specimens—

Carcinoma of cecum
Extensive Scirrhous Carcinoma of Breast
Large Lipoma of Perineum
Fibroid Uterus with Macerated Fetus
Toxic Adenoma of Thyroid

Radiographic Studies—

Gall Bladder (Graham method) in Pancreatic Disease
Cholelithiasis (two cases)
Fracture of scapula
Fracture of tibia
Osteomyelitis of tibia
Gunshot wound of leg
Myositis ossificans
Subdeltoid bursitis

The South Mississippi Medical Society announces that its next meeting will be held in

Laurel, March 8th, with the following men definitely on the program: Drs. U. Maes, New Orleans; W. W. Crawford, Hattiesburg; H. J. Mixson, Laurel. Drs. Joseph Hume and Henry Daspit have also been invited but at the time we go to press no definite word has been obtained. The meeting will be held at the South Mississippi Charity Hospital.

As we go to press, we are pleased to inform the friends of Dr. C. E. Catchings of Woodville, Mississippi, that he is rapidly recovering from an operation performed in Natchez on February 6th because of ruptured appendix.

Dr. Randolph Tucker Shields, Dean of the School of Medicine of the Shantung Christian University, Tsinan, Shantung, China, recently paid a short visit to Natchez where he lived and practiced before going to China. Dr. Shields will spend the better part of the year visiting medical centers in this country and possibly in England before returning to his work abroad.

EXPERT TESTIMONY

There has been recently introduced into the Mississippi Legislature a bill tending to regulate the use of the insanity plea as a defense for crime. Another bill providing for the sterilization of the insane has also been introduced. Such legislative measures are undoubtedly the result of a natural reaction to pleas made by Hickman, Remus, Leopold and Loeb.

The present system wherein alienists are employed independently by the prosecution and the defense has made him the butt for the jokes of the humorist and yet there is no more reason why the alienist should not attempt to make himself as worthy of his hire as does the attorney for the defense or for the prosecution. This, however, is not conducive to swiftness or to surety as far as justice is concerned. Another point that should be considered is the fact that in such cases evidence of a highly technical nature is placed before a jury whose members have never made a study of any phase of insanity; but those who study these conditions—lawyers and physicians—are not eligible to serve upon a jury. Therefore, we are confronted with the absurb condition of presenting a highly technical question, about which experts have been employed to disagree, to a body of men who admittedly know nothing of the condition. How are they to know which group of experts is rendering the more dependable opinion?

It would seem, therefore, far better that there be established commissions composed of three or more alienists whose duty it would be to pass upon the sanity of the accused. Fortunately, in spite of the fact that we have more crime in this country than any other, we still do not have such frequent need of such a commission as to require one for each state. It seems that the presidents of such organizations as the American Psychopathological Association, the American Psychiatric Association and the American Medical Association should be quite competent to appoint commissions of outstanding psychiatrists for different sections of the country. Legislative enactments to recognize and legalize the findings of such a commission could be procured. Such enactments should be based upon the idea that the findings of the commission are to be accepted by the jury as a fact.

This would in no wise interfere with the right of the accused to be tried by a jury, but it would do away with one cause of delay that is bringing such disrepute to American criminal proceedure today. To go a step further, it would be well for our Legislators to consider some fair and equitable plan whereby those who had been adjudged criminally insane could not be pardoned by the usual procedure. It is possible that our commission of alienists might be employed to study the condition of the inmates of these institutions for the criminally insane, but the case of Harry K. Thaw is evidence of the trouble, danger and inconvenience to which the public is submitted quite often when the ordinary pardoning committee boards are allowed to pass on the mental condition of such unfortunates.

COUNCIL PASSED.—The notable success of many pharmaceutical products which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in "New and Nonofficial Remedies" recommends not only the plan itself, but the wisdom of the medical profession in selecting these reliable "Council Passed" remedies for daily use.

Among the medicinal chemicals now being widely used are such "Council Passed" products as ephedrine hydrochloride, neocinchophen, butyn, metaphen, butesin picrate, anesthesin, chlorazene, amidopyrine, procaine and neutral acriflavine, all of which are described in the recent edition of "New and Nonofficial Remedies."

These remedies are the result of research and clinical study. They have been announced in our pages and are worthy of further investigation on the part of our readers.

BOOK REVIEWS

Tobacco and Physical Efficiency: By Pierre Schrumpf-Pierron, M. D. New York, Paul B. Hoeber. 1927. pp. 134.

A digest of clinical facts published under the auspices of the Committee to Study the Tobacco Problem. A very broad and complete summary of the physiological and pharmacological actions of tobacco together with an annotated bibliography of an equal number of pages which contains reference to practically everything that is written about tobacco from the medical viewpoint in the last hundred years.

J. H. MUSSER, M. D.

Emergencies of a General Practice: By Nathan Clark Morse, A. B., M. D., F. A. C. S., Amos Watson Colcord, M. D. St. Louis, C. V. Mosby Co. 1927. pp. 541.

This is a very good book to have on hand for quick, reliable and up-to-date reference. From its pages the old type of the beloved family doctor speaks. He gives information on medical, surgical and obstetrical emergencies — information which doctors, nurses and even laymen will find invaluable.

In this age where everything is specialized a book of this character brings home the fact that many general practitioners are working for the specialists instead of with them. Even the specialist himself would be benefitted by the perusal of this book—"for a specialist in the strict sense of the term should first be a *good allround doctor* and then a little more."

In some chapters details could be left out, such as Cesarean sections and amputations, but the chapter on fractures and dislocations is worth the price of the book. In the opinion of the reviewer the most useful section of the book is that dealing with the various poisons—the one on alcohol is particularly good. Over 300 cuts add to the value of the book.

NARCISSE F. THIBERGE, M. D.

An Illustrated Guide to the Slit-Lamps: By T. Harrison Butler, M. A., D. M. (Oxon.), M. R., C. S. (Eng.), L. R. C. P. (Lond.). London, Oxford University Press. 1927. pp. 144.

A splendid work of 137 pages on microscopic study of the living eye, including a great magnification of the conjunctiva and its blood supply, the layers of the cornea, its nerve and blood vessels, the aqueous currents, the iris, presenting especially in the latter the destructive changes following glaucoma, iritis, etc.

Beautifully confirming the contention of the eye pathologist that without the microscope it is impossible to appreciate the study of ophthalmology. Changes in the lens, anterior and posterior capsule and vitreous are shown and described in a very simple and attractive manner.

This book impresses one with the importance of the Gullstrand Slit-lamp as a part of the equipment especialy necessary in every clinic and office of the oculist. In chapter 14 the value of the slit-lamp in medico-legal cases is herewith quoted.

"All cases referred for report after accidents with reference to compensation should be examined with th slit-lamp. If in a court case the expert witness on one side has made such an examination and medical evidence for the other side has omitted to use the slit-lamp, an immediate opening is given to an up-to-date counsel to discredit the value of evidence gained from what he could point out was an incomplete investigation.

We have seen how the slit-lamp can at once decide the question as to whether a fragment has actually perforated the cornea or not, and that in some cases an approximate date for the perforation can be fixed. In the lens certain time limitations can be defined; for example, a lesion deep in the lens covered by clear lens cannot be of recent date.

The exact nature of inflammatory deposits and of iris synechiae can be discovered and it may be possible to show that such could not have been the result of a comparatively recent accident. The presence of striae in the vitreous points to a wound of the sclera. In a large number of conditions the slit-lamp gives accurate knowledge which cannot be gained without it, and the value of accuracy in medico-legal questions cannot be overrated. The production of definite measurements obtained with the micrometer eyepiece may prove to be the deciding factor in a doubtful case."

Conclusive proof of the fact that diseases such as glaucoma and sympathetic ophthalmitis can be detected in advance of the ordinary clinical symptoms.

ARTHUR L. WHITMIRE, M. D.

Diseases of the Mouth: By Sterling V. Mead, D.D.S. St. Louis, C. V. Mosby Co. 1927. pp. 578.

This comprehensive work is full of valuable information for doctors of medicine as well as for doctors of dental surgery. A feature of interest is the outline of a thorough systematic examina-

tion of the mouth, so useful because of the important local evidences of systemic disease, and because of the statistical frequency of oral cancer. The colored illustrations of pathological conditions about the mouth are excellent in technique and practically helpful. While giving this instructive addition to medical literature its full allottment of praise, one might wish only a less wide scope, omitting some laboratory technique usually left to the expert. All things considered it is a very good book.

HERMANN B. GESSNER, M. D.

Radium in Gynecology: By John G. Clark, M. D., and Charles C. Norris, M. D. Philadelphia and London, J. B. Lippincott Company. 1927. pp. 315.

The very sad death of the senior author of this book before its publication has removed from the ranks of American gynecologists a man who was vitally interested from the start in the use of radium in gynecologic practice. It was he who has done more and who did more probably than any man in this country to place radium in gynecology on a scientific and practical basis, and who early appreciated that radium could replace operation in many types of gynecologic cases. The book will serve as a splendid memorial to the memory of a great and distinguished man.

The history of the use of radium is detailed in the first chapter. The second chapter, by Failla, nearly a hundred pages, is devoted to an exposition of the physics of radium. Following these preliminary chapters comes a chapter on pathology and action of radium and then a series of chapters on radium in malignant diseases of the female generative organs. The last two chapters deal with cervicitis, with sterility and dysmenorrhea.

This monograph of Clark and Norris is a splendid example of an extremely carefully prepared piece of work written from first hand knowledge. The book is splendidly printed, admirably illustrated, with a complete list of references, at the end of each chapter, of the important papers which have appeared dealing with the material in that chapter.

J. H. MUSSER, M. D.

Diseases of the Skin: By Robert W. Mackenna, M. A., M. D., B. Ch. (Edin.). 2d ed., rev. and enl. Baltimore, Williams & Wilkins Co. 1927. pp. 452.

This is one of the best books on dermatology I have seen in a long time. I enjoyed it so much I read it twice. The diseases are arranged for causes: according to, bacilli, vegetable fungi, parasites, etc. The author also shows how after making a tentative diagnosis one skin disease can be eliminated from others by comparison. The weak point in this book as in all others on the market on skin conditions is this: Title page announces "A Manual for Students and Practitioners." Yet, when discussing such lesions as acne, epetheliomas, etc., which require roentgen-ray or radium treatments, they all overlook the fact that they are addressing doctors and embryo dermatologists and not experts or specialists. They all forget to mention the best doses they have used, the frequency of application, and the technique used by them with such success in their own practices.

JOHN A. DEVRON, M. D.

The Diagnosis of Pancreatic Disease: By Robert Coope, M. D., B. Sc., M. R. C. P. London, Oxford University Press. 1927. pp. 112.

A concise, accurate and complete statement of the present day knowledge in this field. The brief summary of the development of that knowledge is stimulating not only to the student of medical history but also to the research worker and bedside observer seeking to extend its limits. Certainly we have come a great way since Sir Thomas Watson wrote in the middle of the last century: "It may seem a slight to the pancreas to pass it over without noticing the diseases to which it is subject. But really these diseases appear but few; and they do not signify their existence by any plain or intelligible signs."

The author's outline of the histology, anatomical relations and physiology and pathology of the gland provide the proper background for the diagnosis of pancreatic lesions which "would be easier if only the doctor remembered that his patient had a pancreas." The various methods used to arrive at a diagnosis are briefed under the following heads:

1. Clinical observations, including roentgen-ray findings.
2. Attempts to detect failure of the discharge of pancreatic juice into the duodenum.
3. Attempts to detect failure of insulin production.
4. The findings and opinion of a surgeon during an abdominal operation.
5. The "therapeutic test."
6. "Esoteric" tests with dubious foundations.

Of the "esoteric" tests with dubious foundations (*e. g.*, those of the Mayo-Robson and Cammidge), the author has no great opinion.

The book is clearly conceived and as clearly written; hence, it is easy reading. It is commended as a dependable guide.

I. I. LEMANN, M. D.

An Introductory Course in Ophthalmic Optics: By Alfred Cowan, M. D. Philadelphia, F. A. Davis Company. 1927. pp. 262.

The keynote of this book is found in the introduction. The purpose in preparation is to convey a working knowledge of ophthalmic optics for students and practitioners. He has succeeded in constructing such a system from immense material obtained from the writings of Helmholtz, Donders, Landolt, Tscherning, Duane, and many others, utilizing 121 illustrations to convey his difficult subject. He has not neglected to use an understandable English with a simplified mathematics. Many will find this book stimulates deeper investigation in optics.

T. J. DIMITRY, M. D.

Ophthalmoscopy, Retinoscopy and Refraction: By W. A. Fisher, M. D., F. A. C. S. 2d ed. rev. and enl. Philadelphia, F. A. Davis Company. 1927. pp. 291.

This book has entered upon its second edition revised and enlarged. Many half-tones with colored illustrations and 48 plates have been added. A chapter on the value of the slit-lamp in ophthalmology has added to the attractiveness of the volume. Many subjects treated of are presented in a simple style of expression and with its many pictures and illustrations we need but glance to grasp the entire contents of the book with little effort on your part. This simplicity of presentation may be considered objectionable and nothing is left to solve. The author wished to accomplish an understandable, working knowledge of the ophthalmoscope and retinoscope, and in this he has been successful.

T. J. DIMITRY, M. D.

Getting Well and Staying Well: By John Potts, M. D. St. Louis, C. V. Mosby Company. 1927. pp. 223.

Although a large library of excellent books concerning tuberculosis already exists, this will be found to be a worthy addition. The author has apparently had a large experience in all phases of the disease as soon becomes evident when reading the book. It is a rather thorough exposition of the subject, couched in a very entertaining and simple language. But it is strictly scientific and medically sound. The book is said to be for patients, public health nurses and physicians. Whether this mode of writing for both laymen and doctor with the several adverse criticisms of the latter is the correct thing is a matter of personal opinion. I am inclined to believe that this is not the best form to employ. All in all, however, the fact is that the book may certainly be read with enjoyment and the assurance of time well spent.

I. L. ROBBINS, M. D.

PUBLICATIONS RECEIVED

W. B. Saunders Company, Philadelphia and London: "Bedside Diagnosis," edited by George Blumer, M. D., 3 volumes with General Index. "Neoplastic Diseases," by James Ewing, A. M., M. D., Sc. D.

J. B. Lippincott Company, Philadelphia and London: "Physical Diagnosis," by Charles Phillips Emerson, A. B., M. D. "Troubles We Don't Talk About," by J. F. Montague, M. D., F. A. C. S.

P. Blakiston's Son & Company, Philadelphia: "Recent Advances in Tropical Medicine," by Sir Leonard Rogers.

Oxford University Press, New York and London: "Bacteriology and Surgery of Chronic Arthritis and Rheumatism," by H. Warren Crowe. "Clinical Researches in Acute Abdominal Disease," by Zachary Cope, B. A., M. D., M. S. "Diagnosis and Treatment in Diseases of the Lung," by Frank E. Tylecote, M. D., D. P. H., and George Fletcher, M. A., M. D. "The Pneumothorax and Surgical Treatment of Pulmonary Tuberculosis," by Clive Riviere, M. D., F. R. C. P.

Paul B. Hoeber, Inc., New York: "Crawford W. Long and the Discovery of Ether Anesthesia," by Frances Long Taylor. "The Peaks of Medical History," by Charles L. Dana, A. M., M. D., LL. D.

The MacMillan Company, New York: "The Young Man and Medicine," by Lewellys F. Barker, M. D., LL. D.

Professional Press, Inc., Chicago: "Baby's Health Day by Day."

D. Appleton and Company, New York and London: "Gynecology," by Howard A. Kelly, A. B., M. D., LL. D. "Pathological Physiology of Internal Diseases," by Albion Walter Hewlett, M. D., B. S.

Williams & Wilkins Company, Baltimore: "The Harvey Lectures, 1926-1927." "Percival's Medical Ethics," edited by Chauncey D. Leake. "Food Infections and Food Intoxications," by Samuel Reed Damon, A. M., Ph. D. "DeLamar Lectures, 1926-1927."

William Wood & Company, New York: "Mosquito Surveys," by Malcolm E. MacGregor.

Harvard University Press, Cambridge: "Mental Health of the Child," by Douglas Armour Thom, M. D.

Libreria Sintes, Barcelona: "Tratado de Patologia y Clinica Circulatoria," by Dr. Duran Arrom.

Commonwealth Press, Inc., Chicago: "Modern Baking Powder," compiled by Juanita E. Darrah.

REPRINTS

"Acute Infection of the Renal Cortex, Its Conservative Treatment," by Winfield Scott Pugh, M. D., Manhattan.